



**WHEN VIRUSES ATTACK! P.10**

PCs are under fire. Macs aren't—yet. We show you how to stay safe.



**FINAL CUT EXPRESS P.48**

Our experts reveal how it stacks up against Final Cut Pro.

**93**  
**MAY**  
**2004**

# MacAddict

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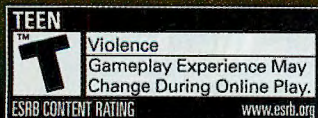
America's military leader must use the world's most advanced military to root out an elusive foe. Eradicating the cell-based GLA will take courage, conviction, and the will to see a prolonged campaign through to the end.



## GLOBAL LIBERATION ARMY:

Facing superior firepower, the GLA embraces bio-terrorism, sabotage, and suicide bombings to further its political agenda. But leading a chaotic group of "freedom" fighters against two global superpowers will take some doing.

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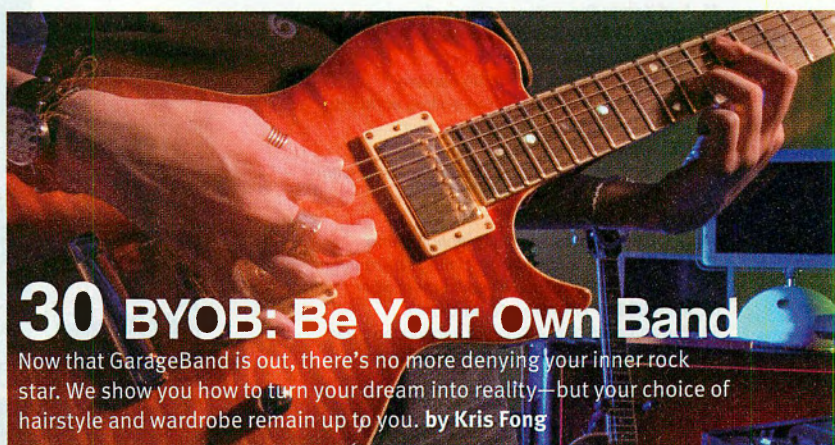


COVER AND FEATURE  
STORY ART BY  
OLIVER WOLFSON

## features

### 16 Unlock iLife

On the surface, iPhoto, iMovie, iDVD, iTunes, and GarageBand may seem simple—but there's much more to them than meets the eye. We've got a feast of tips and how-tos, all dedicated to your iLife. **by Deborah Shadovitz, Helmut Kobler, and the MacAddict staff**



### 30 BYOB: Be Your Own Band

Now that GarageBand is out, there's no more denying your inner rock star. We show you how to turn your dream into reality—but your choice of hairstyle and wardrobe remain up to you. **by Kris Fong**



## how to

#### 64 Ask Us

Put the Trash in each Finder window, add Flash animation to your .Mac Web page, and create a folder using the Terminal. Plus, what to do when you can't boot from a CD.

#### 66 Clean Up Your Mac

You may have an 80GB hard drive, but that doesn't mean you should indulge your inner pack rat. We help you get a handle on your mess. **by Narasu Rebbapragada**

#### 69 Stash Sensitive Files

We've all got something to hide—and if your secrets are in files on your Mac, we've got a foolproof way to keep them safe from prying eyes. **by Kris Fong**



#### 70 Play Oggs in iTunes

Want better-sounding audio files without the licensing restrictions of MP3? Get Ogg. **by Paul Yoon**

#### 72 Cheat Your Way through Mac Games

Taxes? Risky. Spouse? Immoral. Games? Hell yeah! When it comes to cheating, games offer big rewards when you're stuck or when you just plain suck. **by Chris Barylick**





# every month

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Apple's iApps have greatly enhanced our editors' lives—and this month we show you how they can enhance yours.

## 10 Get Info

The Department of Homeland Security's cyberalert system? The MyDoom virus? Relax, your Mac is safe—we tell you why. Plus, a German-engineered camera, photo storage to go, and five tips for better video editing.

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- 57 IntelliScanner Collector bar-code scanner with cataloging software
- 45 iPod mini MP3 player
- 54 Jedi Knight II: Jedi Academy action game
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- 59 RoadStor Portable CD Burner CD burner and media-card reader
- 60 Route USA 2004 trip-planning software
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- 62 Wireless Mobile Router 802.11B wireless router
- 59 Word Menu 2.2 reference tool

## 63 The Hot List

We'd spend our own hard-earned money on these products.

## QUICK TIPS

FROM THIS MONTH'S ISSUE

### ➔ IMPROVE iTunes' SOUND

Volume Logic (\$19.95, [www.octiv.com](http://www.octiv.com)) is a third-party iTunes plug-in that improves upon iTunes' Equalizer and Sound Check features. From "Unlocking iLife," p16.



### ➔ REPEAT THE BEAT

In GarageBand, start by choosing a drum loop, then cycle your drum segment to make it play continuously.

This makes it easier to shop for instrument loops that accompany your beat.

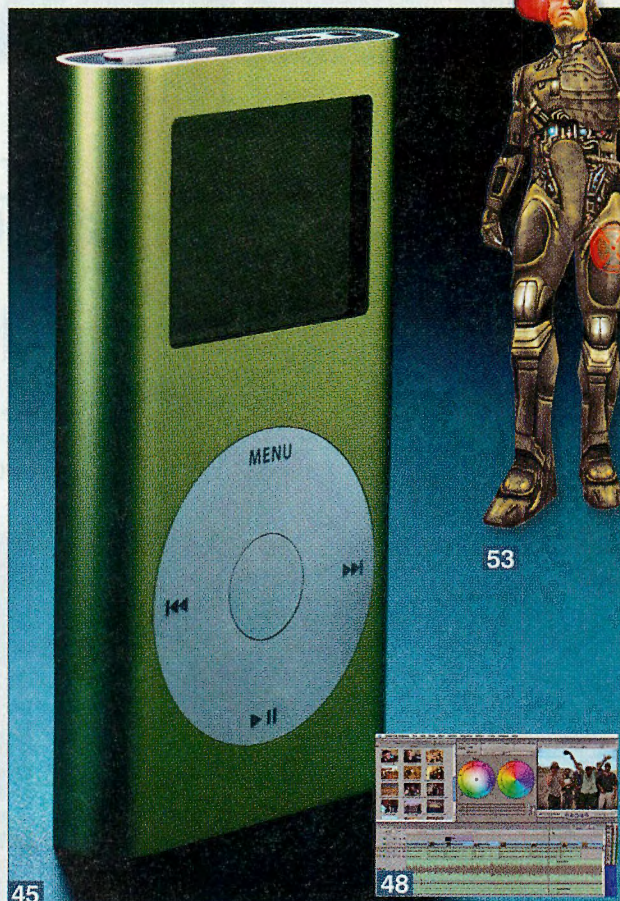
From "BYOB: Be Your Own Band," p30.



### ➔ PRESERVE YOUR BATTERY

As Apple advertises, your iPod mini's battery lasts about eight hours—to squeeze the most out of that battery, turn off

settings such as shuffle, EQ, and backlight. From **Reviews**, p45.



## 94 Log Out

### 94 Letters

Is your Mac a boy or a girl? Where did the Poisoned Kazaa client go? What's the best school in the land? Plus, Apple branches out into hosiery.

### 95 Contest

Win an iPod FM transmitter, a USB audio adapter, and other goodies from Griffin Technology.

### 96 Shut Down

Which is a greater threat to your Mac's well-being—a flying lawn chair or a herd of wildebeests? Check out our Mac durability analysis.





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# the disc

This month our Disc is definitely playing with a full deck: We've got 52 apps and demos for your perusal, including 20 iLife enhancements (see "Unlocking iLife," p16), 11 music-making apps and loops (see "BYOB: Be Your Own Band," p30), as well as 21 utilities, productivity and graphics apps, games, and more.

## Sibelius 3.1.1 demo

GarageBand's great, but if you prefer good ol'-fashioned notes and staves, we've got you covered.



## Star Wars Jedi Knight: Jedi Academy demo

Fire up your lightsaber and kick some Storm Trooper butt.



## AccountEdge 2004 trial

Take a lesson from WorldCom and Enron: Accurate accounting is a must. AccountEdge can help.



## ontheDisc

### AUDIO & MUSIC

Access Virus Apple Loops  
AmpliTube Live 1.0.1 demo  
AmpliTube X 1.2 demo  
Audacity 1.2  
BitShift Free Apple Loops  
Deck 3.5.2 trial  
Dent du Midi 0.7  
Live (OS X) 3.0.2 demo  
MaxMSP 4.3.2 demo  
Melody Assistant X 6.4.4  
Metro SE 6 demo  
Pluggo 3.1.2 demo  
Reaktor X 4 demo  
Sibelius 3.1.1 demo  
Unity Session X 3.3.1 demo  
Volume Logic 1.0 trial

### DEVELOPMENT

iLocalize 1.1.1

### Fun & Games

Active Lancer 1.0.1 demo  
Rock Star 1.0  
Star Wars Jedi Knight: Jedi Academy demo

### GRAPHICS & MULTIMEDIA

Bike Chain Theme

Blue Fade Theme  
Collage (OS 9) 1.0  
Collage (OS X) 1.0.2  
dxdPlay 1.0  
eZeScreen 1.2.1 demo  
Fracturoovalicious 2.0  
iDVD Brick Theme  
iDVD Concrete DropZone Theme  
iDVD Concrete Theme  
iDVD Street DropZone Theme  
iDVD Street Theme  
Masks & Compositing 1.0 demo  
pxl SmartScale 1.0.2 trial  
Silck Sampler  
Smiler Theme  
Timestretch-Visualizer

### INTERFACE

BigFoot 2.2  
Eyeballs 3.0  
Fracture 1.2  
iPodMiniWalker 1.0

### INTERNET & COMMUNICATION

HTTP Mail plug-in (10.2) 1.35  
HTTP Mail plug-in (10.3) 1.35

### Productivity

AccountEdge 2004 trial  
Word Menu 2.2.12 trial

### UTILITIES

BounceBack Express 4.3.1 demo  
DiskTracker (Classic) 2.3  
DiskTracker (OS X) 2.3  
iTunes Publisher 3.1.1  
MacJanitor 1.2.1  
Ogg Drop 1.0b3  
Speed Download 2.3.1

### SPONSORS

CMS Products: BounceBack Express 4.3.1 demo  
IK Multimedia: AmpliTube Live 1.0.1 demo

## Staff Video: The Pepsi Challenge

Watch as the multitasking MacAddict Players search for Pepsi caps that offer free iTunes Music Store downloads—Willy Wonka-style.



52 APPS  
52 DEMOS

20 iLIFE  
ENHANCEMENTS

VIDEO EFFECTS,  
AUDIO LOOPS, DVD  
THEMES, VISUALIZERS,  
DEMOS, AND MORE...

11 MUSIC-  
MAKING APPS

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# Livin' the iLife



My elder daughter, Carey, helped my younger daughter, Rox, with her physics homework last night. They looked over problems in Rox's textbook and discussed the diagrams Rox had drawn to illustrate her lab report. No big deal—except for the fact that Carey lives 3,000 miles away. iChat AV is a wonderful thing.

Apple's iApps have changed my life, and I'm willing to bet that they've changed yours too. I've taken thousands of digital family photos, and

with iPhoto 4, the entire Clan Myslewski can take sentimental journeys via our home network using Rendezvous-enabled shared photo albums. Rox recently shot a digital video of the San Francisco Bay Area's vanishing wetlands, edited it in iMovie, used iDVD to burn a DVD, played it for her marine biology class, and got an A on the project. Our three-iPod family routinely shares music ripped from our CD collections into iTunes. By sharing tunes, I've managed to interest my kids in Leonard Cohen, Leonard Bernstein, and Leonard Nimoy—although Carey still can't understand my enthusiasm for Captain Beefheart and his Magic Band.

And now there's GarageBand, which has already caused me many a groggy morning after tweaking tracks late into the night and reliving my rock'n'roll youth. Luckily, I've had the good fortune of learning a pile of GarageBand

tricks and other audio alchemy from *MacAddict* Senior Editor and pro musician Kris Fong—and you can too. Check out the feature story she wrote for this month's issue, "BYOB: Be Your Own Band," on p30—and don't miss the five editor-created GarageBand tunes on this month's Disc.

Kris contributed even more GarageBand tips to this month's cover story, "Unlock iLife," on p16. Executive Editor Cathy Lu assembled this massive compendium of iLife info from seven expert contributors—including yours truly, the local Rendezvous wrangler. You already know all the iLife apps are easy to use, but you may not know each of them has a passel of hidden capabilities. Cathy and her crew will show you how to create your own PDF albums in iPhoto, automate iDVD with AppleScript, add a commentary track to your DVDs, use color-correction tools to create pro-quality video in iMovie, simultaneously enter track info for multiple tracks in iTunes, and a whole lot more. A whole lot.

In other news: You'll notice a new face in our *Staff Rants* section. Meet

Noah Tsutsui, our overworked, overqualified intern. Noah's a Mac guy from way back—his first was a 512k Fat Mac that he got when he was four years old. Welcome aboard, Noah!



Enjoy,

Rk

## coming soon: june 2004

Here's what our editors are preparing for the next issue of *MacAddict*.

We'll share a bunch of **can't-live-without-'em tips** to help you get the most out of your Mac, its apps, and your peripherals, and we'll **open up an iPod mini** to find out what's inside. We'll also show you how to **build a supercomputer** from your Mac collection, **create your own Apple Loops for GarageBand**, and **import DVD snippets into your iMovie project**. We'll review the 8-megapixel **Nikon Coolpix 8700**, more **pro audio-production software**, and the **most elaborate iPod accessory** we've ever seen. Plus, an exclusive: *MacAddict* and *Guitar World* readers will be invited to enter the **Battle of the Garage Bands**, judged by celebrity guitarist Joe Satriani.

# STAFF RANTS

Q. How has iLife changed your life?



**Cathy Lu** BUBBLE GIRL

**How has iLife changed your life?**

It's great—I never have to talk to anyone anymore. I put on my headphones and listen to iTunes, communicate with people over iChat, organize my pics in iPhoto instead of having to go get them developed. It's like living in a bubble.



**Noah Tsutsui** THE NEW GUY

**How has iLife changed your life?**

I'm stoked that I can actually view my 3,500-photo collection without iPhoto crashing my Dual 1GHz Quicksilver. Now my friends can't escape those incriminating clubbing photos! On the other hand, I've listened to far too many bad GarageBand songs—most of which were made by me. Creating an Electro or Psy Trance dance track is now just too easy.



**Niko Coucouvanis** THE IGENIUS

**How has iLife changed your life?**

iLife has made me an iGenius, at least in the eyes my iFamily, who all suddenly need my iHelp to get in on the MP3 revolution, start taking digital photos, and digitize old videos. Lucky for me, they're still scared of GarageBand.



**Jenifer Morgan** MARSUPIAL MAVEN

**How has iLife changed your life?**

iTunes has helped me better identify my own musical tastes—who knew I needed a Playlist dedicated to songs about kangaroos?



**Narasu Rebbapragada** ZENNED-OUT EDITOR

**How has iLife changed your life?**

Since iTunes can quickly upload an MP3 Playlist to a portable player and burn a CD mix, I've created tons of stress-busting compilations to enjoy while driving, working, and falling asleep.



**Peter Marshutz** PHOTOFILER

**How has iLife changed your life?**

Instead of leaving stacks of vacation and family photos around the house and stashed away in shoe boxes, my photos are all now neatly organized in iPhoto, where they're accessible and easily shared with friends and family.



**Kris Fong** PEACEFULLY PEEVED

**How has iLife changed your life?**

It's forced me to explore my inner Zen. There's only so much cursing I can do when GarageBand or iMovie refuses to play nice with my Mac.



**Mark Rosenthal** CAPTAIN, KOMODO DRAGONS

**How has iLife changed your life?**

I love lizards. iPhoto helps me keep my photos of lizards organized. Plus it can fit any lizard picture on my screen no matter how big the lizard is! Wow-ee!



**Max** FLAT MAN FROM FLATLAND

**How has iLife changed your life?**

It has caused me a world of pain and embarrassment, due to my living in a two-dimensional world. When I turn sideways in an iMovie, for example, my head disappears.





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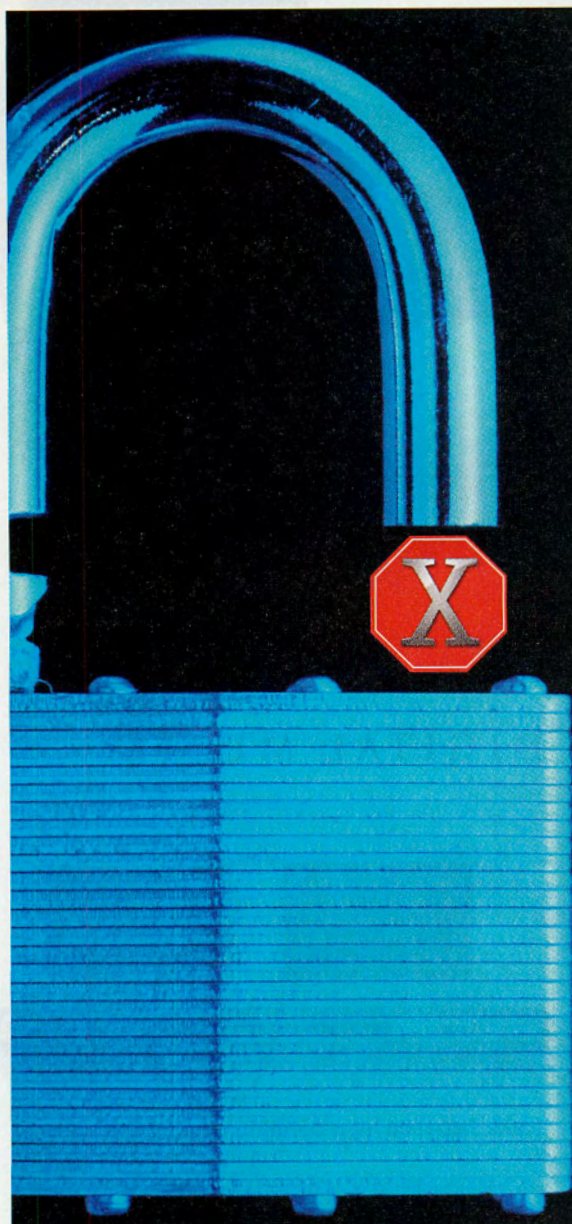
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## MAC OS X: CRIME BUSTER

Apple's Supersecure  
OS Stops Hackers  
in Their Tracks

If this winter's MyDoom virus epidemic made you wary of email and the Internet, relax. Not only did your Mac weather MyDoom unscathed, Mac OS X's armor has proven highly resistant to the antics of cybercriminals.

"There hasn't been a Mac-only virus since 2001," says David Loomstein, group product manager of Symantec's ([www.symantec.com](http://www.symantec.com)) security response division. "Certainly security threats exist, but there are significantly fewer than on the Windows platform." That 2001 Mac virus was the Simpsons virus, an AppleScript-enabled chain email that

promised to deliver secret episodes of the television show *The Simpsons* when users opened an attachment.

### MAC IS HARD

PC advocates will tell you that your Mac gets off easy because it makes up only 5 percent of the computing world. Why write virulent code for such a rare bird when you can attack a whole flock of potential Windows victims?

What these advocates won't tell you is that virus developers prefer to target Windows because writing viruses for Windows is easier than it is for Mac. *BusinessWeek Online's* "Byte

of the Apple" columnist Alex Salkever ([www.businessweek.com](http://www.businessweek.com)) reported in February that writing viruses that exploit the Mac's AppleTalk network protocol is more complicated than Microsoft's "paint-by-numbers Visual Basic, the favorite coding tool of virus writers."

In addition, the tight integration between Microsoft's Windows OS and the ubiquitous Internet Explorer and Outlook email client "creates a situation where an email attachment can exploit vulnerabilities in Internet Explorer," says Scott Granneman, columnist at Security Focus ([www.securityfocus.com](http://www.securityfocus.com)), an online newsletter for security pros.



**OPEN-SOURCE PROTECTION**

Ironically, though experts predicted Mac OS X would be more vulnerable than Mac OS 9 to viruses due to its open-source BSD Unix core, Mac OS X's Unix underpinnings actually make the OS *less* vulnerable. True, virus writers can more easily access open-source code, but then again so can antivirus and firewall developers.

"Since more people have seen it, they've ironed out the bugs," says Granneman about OS X code. "With Microsoft, the code is hidden. That hasn't stopped people from finding [Windows'] vulnerabilities, but it's slowed down people finding out exactly what's causing them and finding fixes for them," says Granneman.

**BETTER SAFEGUARDS**

Mac OS X also has better safeguards built into its interface. For example, every time you install software on your Mac, you need to enter an administrator password, which eliminates the possibility of installing software unknowingly. According to *BusinessWeek's* Salkever, Windows XP does not require password protection for administrator accounts by default. This creates a situation where an unsuspecting XP user could open an email attachment and install software instantly and without warning.

**MACS AND THE FBI**

Macs are so safe that the FBI uses them. In a recent *Security Focus* column, Granneman reported, "Many of the FBI security folks back at FBI HQ use Macs running OS X, since those machines can do just about anything...and they're secure out of the box."

But this doesn't mean Mac users can ignore cyber-security threats. Vulnerabilities exist in Internet Explorer—for both Mac and PC. Plus, when someone physically accesses a computer, "all bets are off," says Scott Janezic, supervisory special agent in the FBI's cyber division.

Particularly vulnerable are machines in computer labs on college campuses. It's not hard for someone to install a hardware or software keystroke logger that records every keystroke made on the machine—including passwords, credit-card numbers, and a host of other information. Luckily, there are no known Mac-based hardware keyloggers, such as the PC-compatible KeyGhost (\$89 and up, [www.keyghost.com](http://www.keyghost.com)), which plugs into a PS/2 port. There are, however, plenty of Mac software loggers. "I'd be very leery of making purchases or entering passwords on publicly available machines," says Janezic.

Janezic says not to be paranoid about using email or connecting to the Internet, but he recommends a few safeguards: Download OS and application updates; get a good antivirus software and update the virus definitions daily; and take time to configure your OS, browser, email client, and router. "A router with a built-in firewall can help to protect you from potential attackers," says Janezic, referring to the fact that the router and firewall can add an additional layer of protection from the Internet. (See "Security Software Options," below, for some major factions in the Mac security wars.)

With a few basic safeguards, you can feel confident that your Mac is protecting you from the world's worst cyber threats.—*Narasu Rebbapragada*

**SECURITY SOFTWARE OPTIONS**

**SYMANTEC'S NORTON INTERNET SECURITY 3.0** (\$99, [www.symantec.com](http://www.symantec.com)) bundles together Norton AntiVirus (\$69.95), Norton Personal Firewall (\$69.95), and Norton Privacy Control.

**INTEGO'S INTERNET SECURITY BARRIER** (\$99.95, [www.intego.com](http://www.intego.com)) includes NetBarrier (\$49) personal firewall, VirusBarrier (\$34.95) anti-virus software, and ContentBarrier (\$59.95) Internet kid-safe software.

**APPLE'S MAC OS X FIREWALL** (free, [www.apple.com](http://www.apple.com)) is built into Mac OS X and located in the Sharing system preferences.

**NEW STUFF**

Canon's i9900 prints with eight colors.

PHOTOGRAPH COURTESY OF CANON

► **EIGHT-COLOR CONSUMER INKJET**

**Canon i9900**

\$499.99, [www.canon.com](http://www.canon.com)

Available: May 2004

Canon offers eight-color, borderless 13-by-19-inch printing with this 4,800-by-2,400-dpi inkjet. Eight individual cartridges include new red and green inks, and USB 2.0 and FireWire interfaces provide versatile connectivity.



The R200 gives you six colors for \$100.

PHOTOGRAPH COURTESY OF EPSON

► **SUB-\$100 PHOTO PRINTER**

**Epson Stylus Photo R200**

\$99 (approximate), [www.epson.com](http://www.epson.com)

Available: Now

Epson's economic photo printer boasts six individual ink cartridges, optimized 5,760-by-1,440-dpi resolution, and direct-to-disc printing.

► **IMPROVED SOUND CHECK**

**Volume Logic**

\$19.95, [www.activ.com](http://www.activ.com)

Available: Now

Touted as the first audio plug-in for iTunes, Activ's Volume Logic works better than iTunes' built-in Sound Check (Preferences > Effects) to normalize volume between songs during playback.



## FIVE TIPS

## EDIT VIDEO BETTER IN FINAL CUT

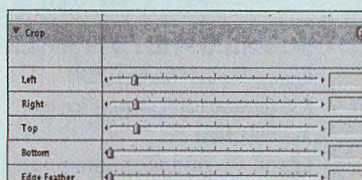
Apple's Final Cut Pro and Final Cut Express are chock full of so many great features for finessing your video that it's hard to know where to begin. For guidance, we spoke to Philip Hodgetts, president and CEO of Intelligent Assistance (<http://assistanceondemand.com>). The company's Assistance On Demand subscription-based software lets you build a custom Final Cut Pro (and Express) how-to database full of video-editing tips such as How2 Create a Telephone Sound or How2 Simulate Video Walls.—NR

### 1 Positioning Video and Stills

One of the great things about Final Cut is that you can position video and stills in the Canvas—the window for viewing an edited video sequence. Select Image + Wireframe from the View pop-up menu at the top of the Canvas window, and drag the video—now a wireframe-enclosed object—where you want it on the Canvas. Click and drag a corner of the wireframe to scale the video, or hold down the Shift key while you drag the wireframe to change the video's shape. If you have Final Cut Pro, set keyframes for each size and position of the clip to animate the video.



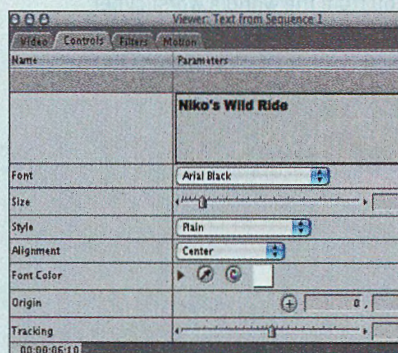
**2 Cropping is Better** To retain better image quality, crop your video instead of scaling it. Using the crop tools in the Motion Tab of the Viewer, for example, you can crop the top and bottom of the image for a fake widescreen look. You can also animate cropping in Final Cut Pro.



Cropping video is better than scaling it.

**3 Crafting Better Titles** To create good-looking video titles, keep away from serif fonts with fine horizontal lines. Choose Text > Text from the Generator pop-up menu and then click the Control tab to access the titling controls. Keep type sizes bigger than 20 points. Drop the white by typing 235 in the R, G, and B fields (90 percent white). Avoid putting white titles over

black backgrounds—use a textured background when possible. If you have to use white text on a black background, use a noise generator to slightly pixilate the background behind the title so the text stands out. In the Generator pop-up menu (located in the lower-right corner of the Viewer window), click the Render disclosure triangle to find the Noise command. Set the noise to 5-percent opacity behind the title and make the title 90-percent opaque.



Tweak your titles in the Controls tab of the Viewer window.

### 4 Using Free Type Plug Ins

Speaking of titles: Take advantage of BorisFX's free Calligraphy plug-ins—Title 3D and Title Crawl—which are located in the Viewer's Generator pop-up menu. More free text styles are available on BorisFX's What's For Free page ([www.borissfx.com/download/freebies.php](http://www.borissfx.com/download/freebies.php)).



Boris FX's Title 3D comes free with Final Cut.

**5 KISSin'** KISS stands for Keep It Simple, Stupid—good advice if you're making Web video. Adding lots of cuts, transitions, and effects makes your video harder to compress. Wipes are more compression-friendly than dissolves.





iCurve



GBreeze



iBreeze



PodiumPad

PHOTOGRAPH BY MARK MADEO

## PROP UP YOUR 'BOOK

The right laptop stand can cool your 'Book, make it more ergonomically correct, and give it some pizzazz. Here are a few we like.—NR

### ▶ GRIFFIN TECHNOLOGY'S iCURVE

(\$39.99, [www.griffintechology.com](http://www.griffintechology.com)) is a futuristic-looking pedestal for your 'Book that brings the screen to an ergonomically correct eye level.

### ▶ MACMICE'S GBREEZE

(\$29.95, [www.roadtools.com](http://www.roadtools.com)) swivels your 'Book and has adjustable risers that tilt it to your liking.

### ▶ MACMICE'S iBREEZE

(\$29.99) lifts and cools your notoriously hot PowerBook's underbelly using two USB-powered fans.

### ▶ ROAD TOOLS' PODIUMPAD

(\$49.99 to \$69.99, [www.macmice.com](http://www.macmice.com)) an anodized-aluminum, perforated stand that cools and props up all sizes of 'Book.

## THE MAC PURSE

Why restrict your laptop to a boxy computer case? If the occasion calls for it, carry your 'Book in a clutch purse like

### SurlyGirls' Script Clutch

(\$120, [www.surlygirlstudios.com](http://www.surlygirlstudios.com)). Its corduroy exterior, magnetic snap, and vinyl Hawaii Five-0-style interior protects and transports your Mac in style.



A smart, slim way to carry your 'Book.

## DEADLINE: APRIL 30, '04

By 11:59:59 p.m. on April 30, you need to find all those sticky Pepsi bottle caps you've been hoarding, launch iTunes, click the Redeem Song button on the Music Store page, and trade in



Redeem your free iTunes songs!

the promotional code for free iTunes songs. According to the rules of the contest, on May 1, all that Pepsi bottle will get you is five cents in recycling refund.

## SHAREWARE PICK OF THE MONTH

### ROCK STAR

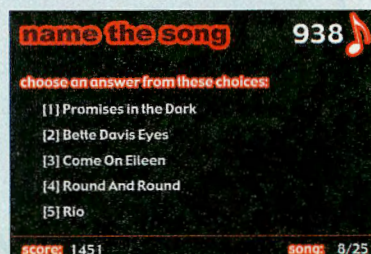
[www.freshlysqueezedsoftware.com](http://www.freshlysqueezedsoftware.com) \$14

If you're hankering for the millennium Mac version of the classic TV show *Name That Tune*, try out Rock Star. Drawing on your iTunes Playlist of choice, Rock Star plays a segment of a song, uses the ID3 tag information to quiz you on the song's name, artist, album info (it's timed, of course), or all three criteria simultaneously. You can upload your high scores to



Freshly Squeezed Software's online high-score list.

—Andrew Tokuda



Playing Rock Star is like playing *Name That Tune* without the TV.

PHOTOGRAPH BY MARK MADEO

IMAGE COURTESY OF APPLE





## DROOLWORTHY

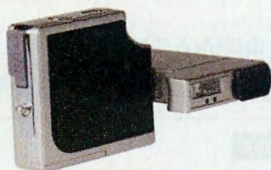
Sexy Stuff We Can't Wait to Get Our Mitts On



PHOTOGRAPH COURTESY OF ROKU

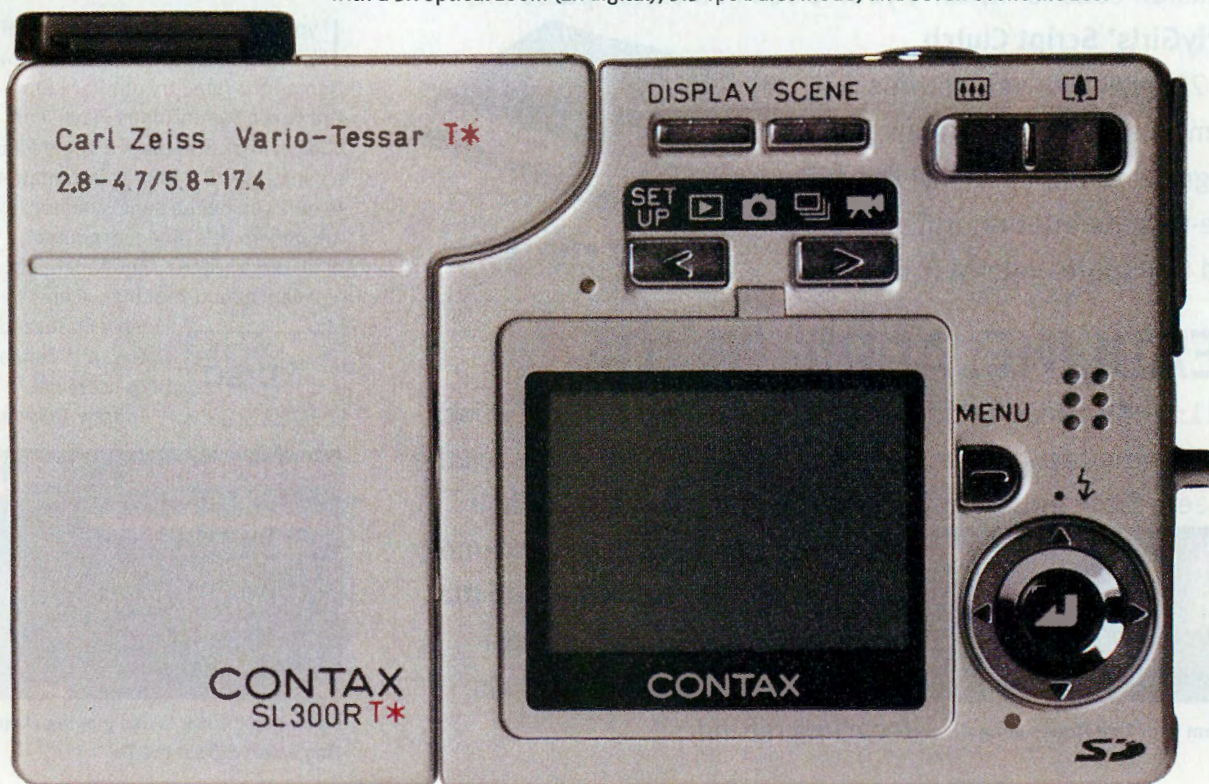
## Mac Home Stereo ↑

The **Roku SoundBridge M2000** (\$499.99, [www.rokulabs.com](http://www.rokulabs.com)) is a 17-inch baton-shaped gadget that transfers the digital music in your Mac's iTunes Library to your home stereo system via Ethernet. A 10-inch version is also available for \$249.99. The Rendezvous-aware SoundBridge supports MP3, AAC, AIFF, WAV, and other formats. It also supports AirPort but requires the purchase of the SoundBridge Wi-Fi network adapter (\$49.99) to do so.



## Zeiss? No Scheisse! ↓

If you yearn for precision German engineering but can't afford a BMW, why not splurge for Kyocera's 3-megapixel **Contax SL300R T\*** (\$499.99, <http://global.kyocera.com>) and its fancy-schmancy 5.8mm to 17.4mm, f-2.8 to f-4.7 Carl Zeiss Vario-Tessar T\* Zoom Lens. This slim, swivel-lens magnesium camera with leather accents comes with a 3x optical zoom (2x digital), 3.5-fps burst mode, and seven scene modes.



PHOTOGRAPH COURTESY OF KYOCERA



## THE MYST SERIES RETURNS

This time Yeesha, daughter of Atrus, leads you through engaging worlds like this one.

### Uru: Ages Beyond Myst

Price \$49.95  
Available TBD  
Ubi Soft  
<http://uru.ubi.com/us>

Cyan Worlds, maker of *Myst* and *Riven*, brings you *Uru: Ages Beyond Myst*, the most ambitious *Myst* experience yet. As in previous games, you discover real-time 3D worlds by solving challenging puzzles, but this time the goal is to unravel the mysteries behind the lost D'ni people with the help of Yeesha, daughter of the famous *Myst* hero, Atrus. Also new are the abilities to customize your character and to move freely without pointing and clicking. Cyan will release expansion packs later this year. The first expansion, called *To D'ni*, will be a free download. Read more about the official Mac release and expansion packs at [www.cyan.com/letter.htm](http://www.cyan.com/letter.htm).—*Matt Osborn*



In *Republic: the Revolution*, use brawn and brains to win over the proletariat.

## YOU SAY YOU WANT A REVOLUTION

Plot, scheme, and assassinate your way to the top of one of 16 factions in the fictional Soviet republic of Novistrana. Your objective: Overthrow the President by wooing the proletariat. Recruit people of influence. After all, your goal is to rule with an iron fist—or die trying.—*MO*

### Republic: The Revolution

Price \$49.95  
Available Q1 2004  
Feral Interactive  
[www.feral.co.uk](http://www.feral.co.uk)

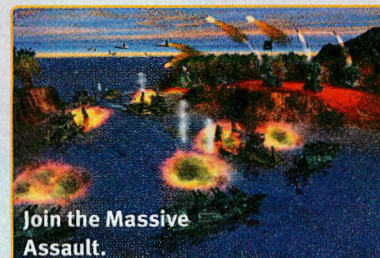
## IN OTHER NEWS

Check out these other kick-ass games heading your way.—*MO*

Game	What It's About
<b>WORMS 3D</b> Price: TBD Available: Q2 2004 Feral Interactive <a href="http://www.feral.co.uk">www.feral.co.uk</a>	Lead a squad of 3D worms! In this turn-based, action-strategy game, you engage your team in epic battles against other worm armies using outrageous weapons such as ninja ropes and mad cows. Both single-player and multiplayer (including online) modes are available.
<b>MASSIVE ASSAULT</b> Price: \$39.99 Available: Q1 2004 Virtual Programming <a href="http://www.vpltd.com">www.vpltd.com</a>	This turn-based strategy title focuses on combat rather than resource management. <i>Massive Assault</i> puts you in command of either the Free Nations Union (the good guys) or the Phantom League (the evildoers). Expect epic power struggles.
<b>NANOSAUR II: HATCHLING</b> Price: \$24.95 (download), \$35.95 (boxed) Available: Q1 2004 Pangea Software <a href="http://www.pangeasoft.net">www.pangeasoft.net</a>	It's been five years since you first played a technologically enhanced Raptor blasting enemy dinos to save her eggs. Your mission is the same in <i>Nanosaur II: Hatchling</i> , but you take to the skies—you're a pterodactyl loaded with hi-tech weaponry. The game's new two-player mode includes racing, capture-the-flag, and death-match styles of play.



Battle worms in 3D.



Join the *Massive Assault*.



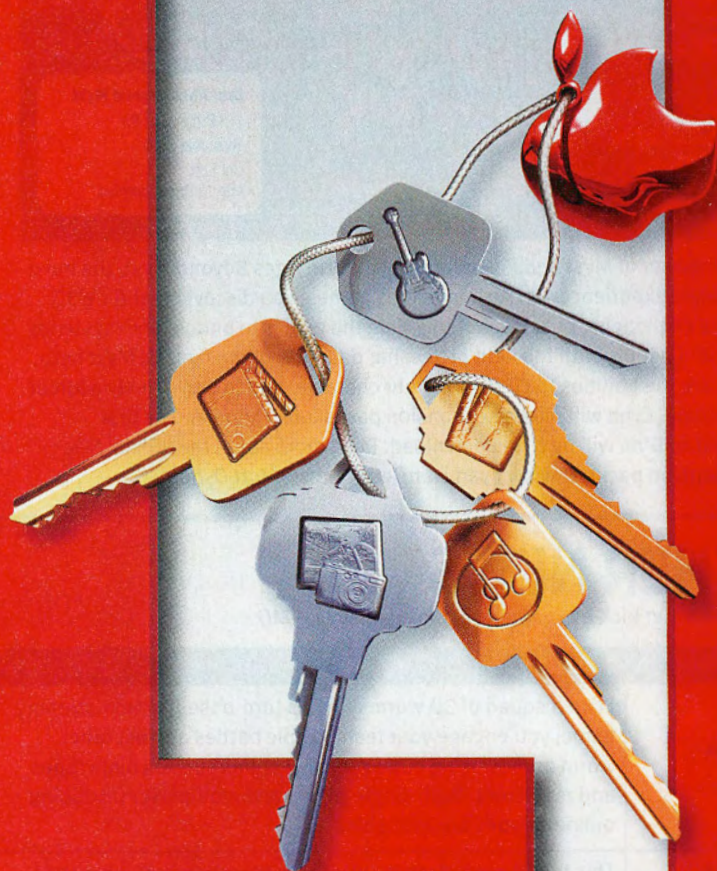
Beware! Flying pterodactyl!

## IS XBOX NEXT G5 TO THE CORE?

Word has it that Microsoft plans to use three IBM-designed PowerPC G5 chips in its next-generation video game console, Xbox Next. Just think: Game prototypes may be running at Microsoft on Power Mac G5s right now.



# UNLOCK

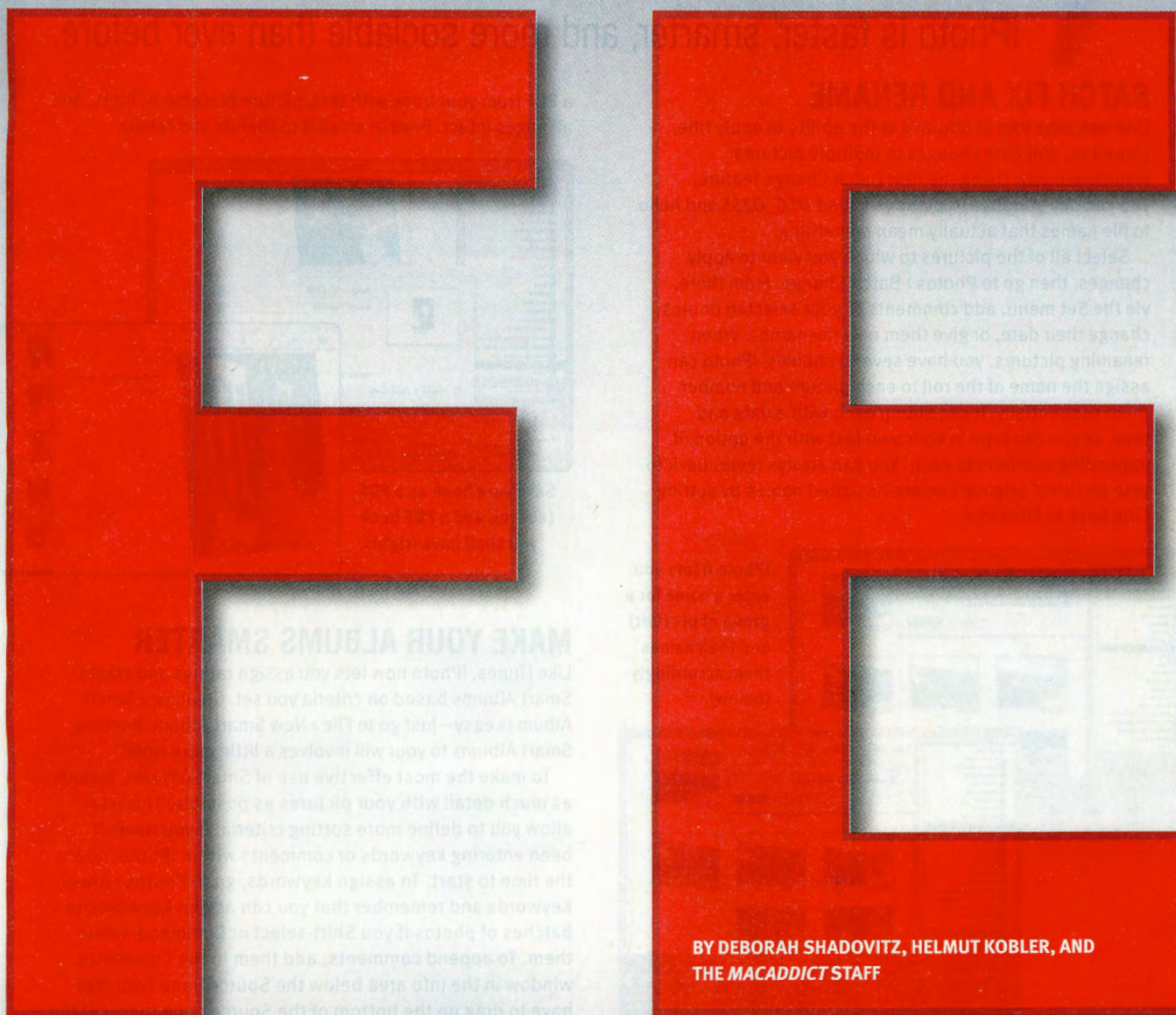


**O**pen any of the iLife '04 apps—iPhoto, iMovie, iDVD, iTunes, or the new GarageBand—and you'll be up and running in no time. But what many iLifers don't realize is that there's more to these apps than meets the eye. A lot more.

Sure, iPhoto is a great way to organize your pictures, but you can also use it to easily share your photos with others. iMovie's color correction and titling tools may seem meager, but that doesn't necessarily have to be true. And while it's not hard to



# \$49 buys you a lot of creative power in Apple's iLife '04. We show you how to unleash all of it.



BY DEBORAH SHADOVITZ, HELMUT KOBLER, AND  
THE MACADDICT STAFF

create a song in GarageBand, the challenge is to create one even your mother could love. Don't worry—we show you how you can make your compositions sound more precise and pleasing.

From new features to hidden ones, shortcuts to shareware, we give the whole scoop and nothing but the scoop on iLife '04. By the time you're done reading, you'll never look at these apps the same way again.

 ON THE DISC	
Access Virus Apple Loops, Bike Chain Theme, BitShift Free Apple Loops, Blue Fade Theme, Collage 1.0, Dent du Midi 0.7, dxpPlay 1.0, eZeScreen 1.2.1 demo, Fractogroovalicious 2.0, IDVD Brick Theme, IDVD	Concrete DropZone, IDVD Concrete Theme, IDVD Street DropZone, IDVD Street Theme, iTunes Publisher 3.1.1, Masks & Compositing 1.0 demo, Slick Sampler, Smiler Theme, Timestretch-Visualizer, and Volume Logic 1.0 demo





# iPHOTO 4

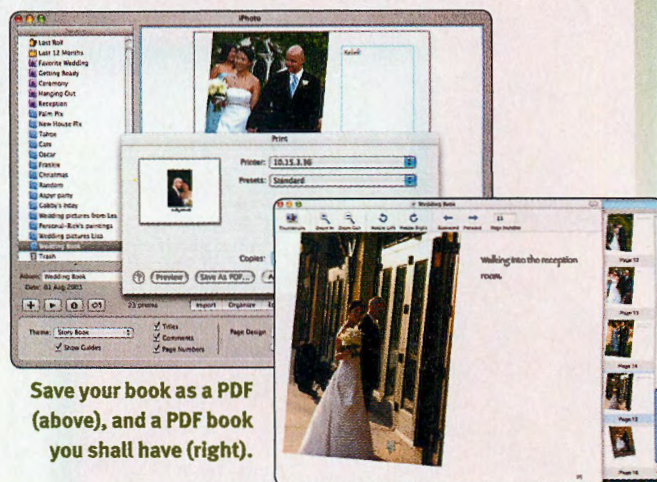
iPhoto is faster, smarter, and more sociable than ever before.

## BATCH FIX AND RENAME

One welcome tool in iPhoto 4 is the ability to apply title, comment, and date changes to multiple pictures simultaneously. Using the new Batch Change feature, you can say goodbye to pictures called *DSC\_0255* and hello to file names that actually mean something.

Select all of the pictures to which you want to apply changes, then go to Photos > Batch Change. From there, via the Set menu, add comments to your selected photos, change their date, or give them new file names. When renaming pictures, you have several choices. iPhoto can assign the name of the roll to each picture and number them sequentially, it can stamp each with a date and time, or you can type in your own text with the option of appending numbers to each. You can always revert back to your pictures' original camera-assigned names by setting Title back to Filename.

a PDF from your book with text, picture placement, fonts, and all pages intact. Print or email it to friends and family.



Save your book as a PDF (above), and a PDF book you shall have (right).



iPhoto 4 lets you enter a name for a group of pix (left) and then names them accordingly (below).

## CREATE A PDF BOOK

If you want to create your own book of photos without spending the \$30-and-up that Apple charges, you can still utilize iPhoto's book-layout capabilities and create a PDF with the same look.

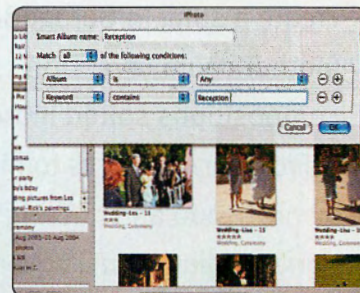
First create an album containing all the pictures you want in your book—and make sure you put them in the order you want them to appear. Click the Book button, choose a theme, and lay out the book, complete with titles and text. Go to File > Print and click the Save As PDF button. Mac OS X will generate

## MAKE YOUR ALBUMS SMARTER

Like iTunes, iPhoto now lets you assign ratings and create Smart Albums based on criteria you set. Creating a Smart Album is easy—just go to File > New Smart Album. Bending Smart Albums to your will involves a little more work.

To make the most effective use of Smart Albums, include as much detail with your pictures as possible. This will allow you to define more sorting criteria. If you haven't been entering keywords or comments within iPhoto, now's the time to start. To assign keywords, go to Photos > Show Keywords and remember that you can assign keywords to batches of photos if you Shift-select or Command-select them. To append comments, add them in the Comments window in the info area below the Source pane (you may have to drag up the bottom of the Source pane to reveal the Comments window). Rating your photos also helps when it comes to creating Smart Albums. A quick way to rate a photo is to select it and press Command-1 through -5 to assign the number of stars you want to dole out—and remember that you can batch-rate too.

Test iPhoto's IQ by creating Smart Albums.





## MAKE SLIDE SHOWS ROCK

iPhoto 4 now lets you pick either a single song or an entire iTunes Playlist (but not a variety of random songs) to accompany a slide show, and offers several transition choices, such as Cube and Wipe.

iPhoto 4's slide shows also let you organize your photos. In the Slideshow dialog, clicking the Display Slideshow Controls box brings up a control bar—these controls let you rate photos, trash them, or rotate them while you're viewing your slide show. ¡Muy conveniente!

Oh, here are a couple of quick shortcuts while you're in slide-show mode: The space bar pauses, the up- and down-arrow keys adjust the speed, and numbers 0 through 5 assign ratings.



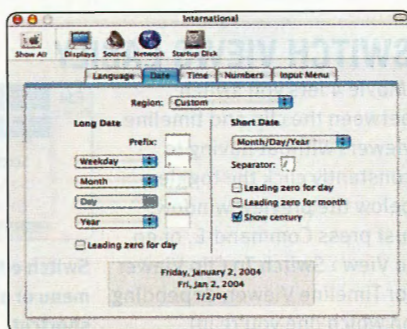
iPhoto 4's new Slideshow dialog is flush with options compared to previous versions.

## FIX iPHOTO'S DATING PROBLEMS

If you have pictures dating back to the Roosevelt period (we're talking Teddy), it's important to differentiate pictures from 1904 and 2004. Unfortunately, iPhoto by default only displays the last two digits of a year. To display a four-digit year, go to Mac OS X's System Preferences, choose International, and then under the Formats tab, click the Customize button. In that dialog, click the Show Century check box. (In Jaguar, this box is under the Date tab.)

If you change to four-digit years, iPhoto won't accept dates before 1950 when you are defining Smart Albums or using Batch Change without a workaround. Type in 1935, for example, and iPhoto assumes you mean 2035. To set a date prior to the year the Korean War began, you need to type in 1950 and then use the down-arrow button to adjust the year.—CL

Click Show Century in System Preferences to differentiate between 2004 and 1904.

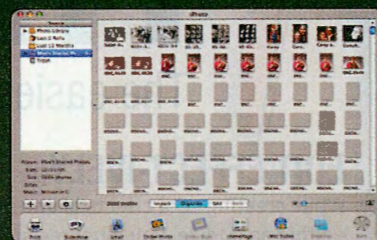


# SHARE THE LOVE

In iPhoto 4, Apple introduced the ability to share your photos via Rendezvous. In the right hands, this can be a powerful feature. In the wrong hands, you might just find a picture of yourself on [www.hotornot.com](http://www.hotornot.com). So share wisely, and heed these tips.—RM

## DON'T SHARE ALL

Unless you have only a few photos in your iPhoto Library and you're fortunate enough to be running top-speed Macs over a Gigabit Ethernet network, don't share your entire Library. Opening a large shared iPhoto Library can be mind-numbingly slow—even over a 100Base-T Ethernet connection.



If you're accessing a large remote Library, be prepared to wait while thumbnails upload.

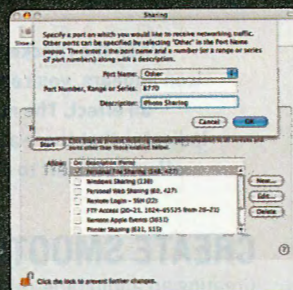
## SHARE SELECT PHOTOS

There's an easy way to share a few select pictures. In the Keywords dialog (Photos > Show Keywords), create a keyword named *shared*, and assign it to all the photos you want to share across your network. Then create a Smart Album named *My Shared Photos* where the keyword contains the word *shared*. To share this album, go to Preferences > Sharing and check the box next to its name.

Likewise, to make only your most-recent photos available for sharing, create a Smart Album named something like *Most Recent*. Set the conditions so that the Roll Is In The Last, and enter how many recent rolls you want to make available.

## KEEP YOUR FIREWALL GOING

Want to keep your Mac OS X firewall active while sharing photos? Go to the Sharing system preferences and under the Firewall tab, click New. In the resulting box, choose Other from the Port Name pop-up menu, enter 8770 in the Port Number, Range Or Series field, and enter iPhoto Sharing in the Description field. Click OK, then scroll to the end of the Allow list, click the check box next to iPhoto Sharing (8770), and you're good to go.



You can keep your firewall active and still share.

## ENLARGE BEFORE DOWNLOADING

You can drag a photo from a remote Library onto your desktop—but but enlarge it first using the zoom slider, or you'll only get its low-res thumbnail and not the full image.



Drag a thumbnail, get a thumbnail.





# iMOVIE 4

The easiest DV editing app is more powerful than you think.

## EDIT EFFECT-IVELY

While creating cool effects is one of the more fun parts of editing an iMovie, you must resist playing with them until you've edited all your clips, split them, cut unwanted video, and emptied the Trash. That way you can still undo your handiwork. If you empty the Trash after applying an effect, you cannot remove the effect. By the way, iMovie tells you if you can still remove an effect from a clip by displaying a checkerboard icon in the clip viewer.

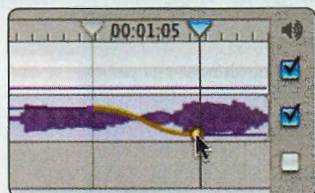
So how do you undo an effect? Just select the clip in the timeline or clip viewer and press Delete. If you've applied multiple effects, iMovie only deletes the last effect. To remove more effects, keep pressing Delete. A number representing the number of effects you can undo appears to the left of the checkerboard.



When the checkerboard icon appears, you can undo an effect. The number indicates that there are four effects still left to delete.

## CREATE SMOOTH AUDIO FADES

Creating an audio fade-out at the end of a movie or track is easier than you think. After extracting the audio, go to timeline view and make sure the audio track is visible and the Edit Volume box is checked. Click the straight, solid line within the audio track at the point where you want the fade-out to start. This places a yellow marker at the spot. Now click the point where you want to mute the sound, and drag that point down as low as you can. iMovie will create a curve that fades out your audio smoothly—no need to create any more than two points in your audio. To adjust the start or end point of the fade, drag the corresponding marker forward or backward.



For the smoothest audio fades, create two points in your audio.

## BOOKMARK YOUR MOVIE

One new feature in iMovie 4 is the ability to add bookmarks, which enables you to mark—and jump to—any position in your movie. To add a bookmark, move the playhead to the desired location, then choose Bookmarks > Add Bookmark, or press



Mark your place via the new Add Bookmark command.

Command-B. Click the bookmark (a green diamond symbol) to jump to that spot in your movie.

This feature is useful for many reasons. For example, if you haven't extracted your clip's audio, it can be difficult to identify the moment a particular sound plays. That's because when you scrub through a movie you can't hear the audio. A bookmark, however, can help you note that spot. Simply play your clip and press Command-B when you hear the sound.

Bookmarks are also a great help when you're working with a long movie. Under the new Bookmarks menu are Previous Bookmark (Command-]) and Next Bookmark (Command-[). No matter where you are in your movie, these commands will jump you to your next bookmark.

## SWITCH VIEWS EASILY

iMovie 4 lets you switch between the clip and timeline viewers without having to constantly click the toggle below the preview window. Just press Command-E, or go to View > Switch To Clip Viewer (or Timeline Viewer, depending on which one you're in).



Switch edit views via the menu or a keyboard shortcut.

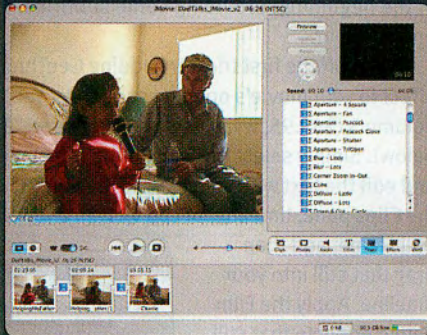


# HOW TO REMOVE UNWANTED SOUND

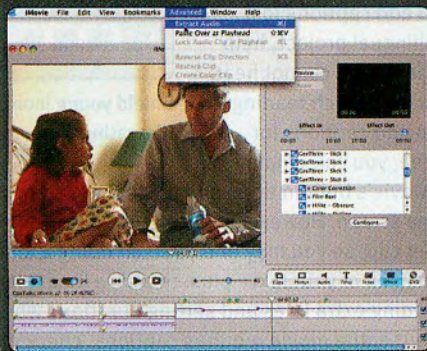
Egads! You've captured a once-in-a-lifetime video clip—but it's marred by unwanted noise from your camera, nearby traffic, or that schmuck next door yelling at his kids. Don't worry, you aren't fated to spend a fortune on audio cleanup. Instead, do it yourself with Bias's SoundSoap (\$99, [www.bias-inc.com](http://www.bias-inc.com)). —DS

**1** Use iMovie as normal, cutting and deleting unwanted video, splitting clips, organizing your timeline, adding transitions, and so on.

(You don't have to do this first, but these tasks are harder to accomplish after you've extracted audio.)

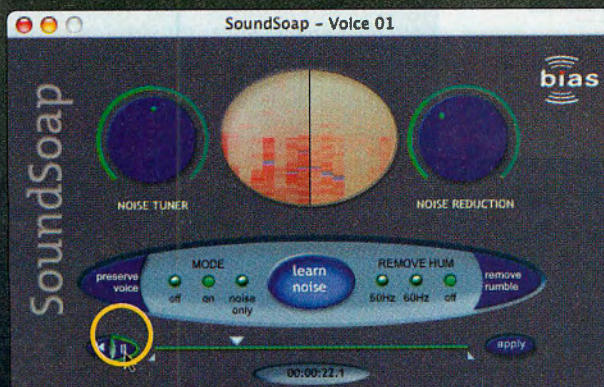


**2** Select the clip you want to clean, and choose Advanced > Extract Audio. (Don't worry about your footage—iMovie simply mutes the audio and creates a copy of it.)

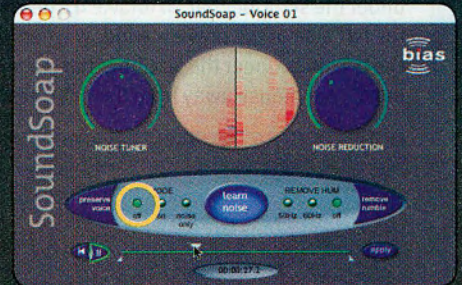


Save, and then quit iMovie. Tip: The first track you extract is named Voice 01, regardless of where it is in the timeline, so it's helpful to extract each track in order from the beginning of your timeline or in order by clip number.

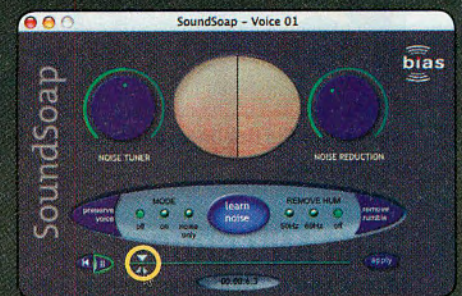
**3** Launch SoundSoap and choose File > Open Media File. Navigate to the audio file you want to clean—usually located in your Movies > movie name > Media folder—and click Open. SoundSoap automatically does some filtering and turns on the filtering button (under Mode). Click play to hear the result of this automatic filtering. If your file sounds great now, jump to step 7.



**4** If you want to do some of your own tweaking, click the Off button under Mode to hear the audio as is. Click play, and then locate a second or two of quiet that contains your unwelcome noise and little else.



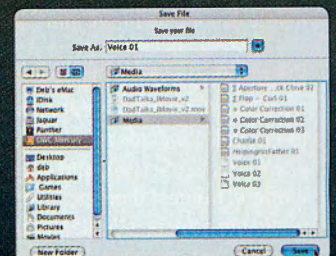
**5** Create a loop of the sound so that SoundSoap can learn which noise to get rid of. First, select Transport > Loop. While the sound's playing, drag the In point (bottom-left triangle) to a quiet spot before the start of the noise, and drag the Out point (bottom-right triangle) to a place after the noise ends. You can hear the result as you drag. As the playback is looping, click Learn Noise.



**6** Choose Edit > Select All, and the entire audio timeline becomes bright green. Then click Apply—the window darkens, and the playhead jumps to the start of the file and advances as the app filters. When it's complete, the controls light up again. Now, if you find more unwanted noise in your file, you can isolate it, click Learn Noise again, and click Apply to apply the filter to just that selection.



**7** When you're happy with the sound, choose File > Save As and save the file using the same name and location as the file you imported—this will overwrite the original sound file. Relaunch iMovie, and you'll hear your new, clean track in place of the old, noisy one.







## iMOVIE 4

## LOCATE MISSING CROP MARKERS

In its iMovie tutorial, Apple tells you that cutting away the beginning or end of a clip involves locating the crop markers under the scrubber bar. In iMovie 4, the crop markers appear at the left side of the preview window when you mouse over any of the tick lines under the scrubber bar. They disappear when you move your mouse away from the tick lines.



Mouse over the tick lines, and thou shalt find the hidden crop markers.

## TRIM AND CROP

In case you're wondering, there is a difference between the Cut, Clear, and Crop commands under the Edit menu—a big difference. When you choose Cut or Clear, iMovie cuts any material between the crop markers (the yellow area). When you choose Crop, iMovie keeps all material in the yellow area between the crop markers and removes any footage on either side of them.

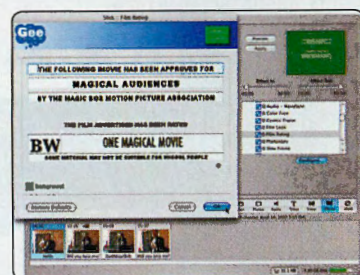
## GIVE YOUR MOVIES THEATER STYLE

If you want to give your viewers more of a theater feel when they're watching your movies, consider adding a rating screen at the beginning, providing some subtitles, or spilling Coke on your floor.

To pull off the first trick, try adding GeeThree's Film Rating effect to your movie's opening sequence. You'll find it in Slick Volume 5 (\$49.95, [www.geethree.com](http://www.geethree.com); see "Empower iMovie," below). Simply select the Film Rating effect, click Configure, and edit the text with your special message. Select any clip in the Clips pane, timeline, or clip viewer, choose Edit > Create Still Frame, and then drag that still into your timeline. Apply the Film Rating effect to that still.

Another neat effect is to provide captioning. This is useful if you want to add captions to a bilingual project, help those who cannot hear, or help teach reading. To add captions for free, you can employ

iMovie's built-in titles and place them across the bottom of the screen. However, you can only apply one iMovie caption per clip, so you may find yourself doing a lot of clip cutting to fit all of your text—plus, there's a lot of work involved in adding extra lines and setting durations when using iMovie. If your entire movie requires captions, check out Slick Caption, by GeeThree (\$49.95), which is easier to control and lets you create multiple captions for each clip.—DS



Shield young innocents by adding a film rating to your movie.

## EMPOWER iMOVIE

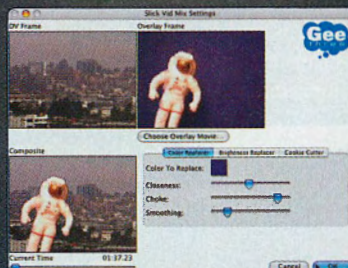
While you can do a lot with iMovie out of the box, you can do even more if you add some plug-ins—everything from new transitions and effects to more audio-editing capabilities. Here are a few of our favorites.—DS

**BIAS SOUNSOAP** (\$99, [www.bias-inc.com](http://www.bias-inc.com)) and Peak 4 DV (\$199). Bias SoundSoap makes it easy to remove those annoying unwanted machine and street sounds. Peak 4 DV provides easy-to-view audio depictions of your sounds, enabling you to delete every unwanted "um" and "uh."

**EZEDIA PLUG-INS FOR iMOVIE: VOL. 1** (\$69, [www.ezedia.com](http://www.ezedia.com)) and eZediaMotion for iMovie (\$49). Vol. 1 includes three effects packs—eZeMatte, eZeScreen, and eZeClip, which let you add images, borders, frames, themes, logos, movies, blue-screen, and picture-in-picture effects. eZediaMotion for iMovie lets you add and animate text, graphics, and movies on top of a clip.

**GEETHREE SLICK VOLUMES 1 THROUGH 6** (\$29 to \$69, [www.geethree.com](http://www.geethree.com)) and Slick Caption (\$49.95). Slick

Volumes 1 through 6 contain collections of transitions, titles, and effects. These include picture-in-picture and blue-screen effects (Volume 4), film noise (Volume 1), and a video-wall montage of up to 64 moving or still images on one screen (Volume 6). For advanced captioning, try Slick Caption.



You can use GeeThree's blue-screen effect to boldly go where no man has gone before.

**STUPENDOUS SOFTWARE EFFECTS PACKS** (\$25 each, [www.stupendous-software.com](http://www.stupendous-software.com)). Stupendous offers various effects and title packs, such as the Ascii & Art iMovie Pack, which creates abstract and artistic

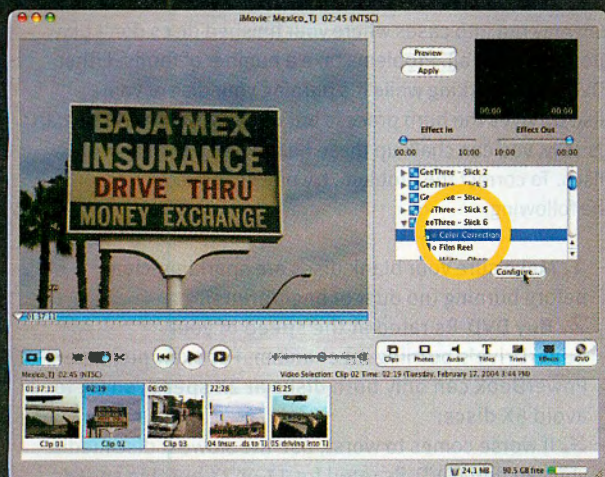
interpretations of your clips; Time Effects iMovie Pack, which includes 12 time-distortion effects; and Crops & Zooms iMovie Pack, which has 34 effects for cropping, zooming, scaling, and so on.



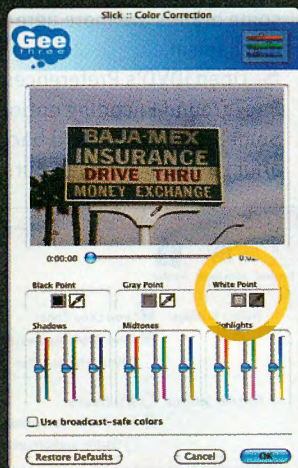
# HOW TO CORRECT COLORS

What can you do when the color of your video clip looks less appealing than month-old, room-temperature cheese? First you can try the color effects that come with iMovie, including Adjust Colors and Brightness & Contrast. If these do the job, great. But if you need serious color correction, it's time to call in the big guns. We like GeeThree's Color Correction, which comes in the Slick Volume 6 pack (\$69, [www.geethree.com](http://www.geethree.com)).—DS

**1** Select the clip you want to tweak in the timeline or clip viewer. Click the Effects button and scroll to the GeeThree - Slick 6 folder. In that folder, select Color Correction.



**2** Click Configure to open the Slick Color Correction window. If you have white objects within your video, set the white point, which alters brightness as well as hue. Click the eyedropper under the White Point header, then click in your video on something that is supposed to be white—you can drag the slider to scrub through your video to locate a white object. If there's black in your video, set the black point the same way.

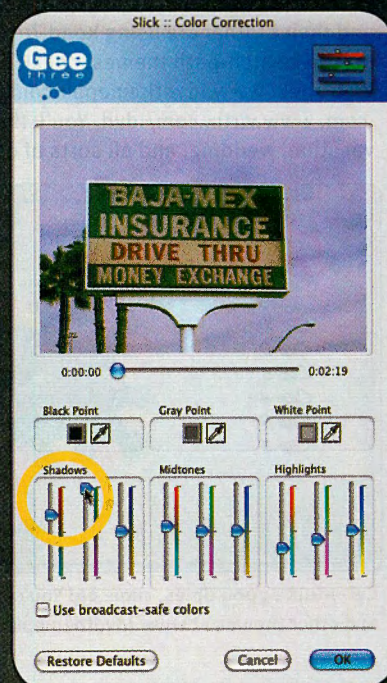


**3** If your video is too dark or too light, adjust the gray. To do that, you need to define the gray you want as the midpoint between dark and light. Click the gray swatch to open the color picker. Drag the slider up or down to determine your middle gray. The darker the gray point, the lighter

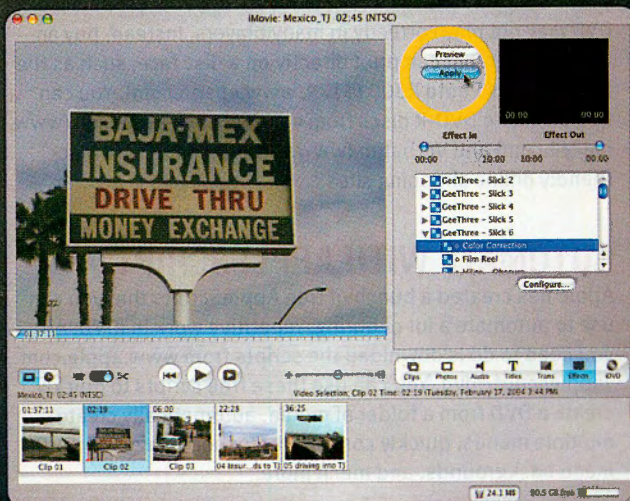


the image gets. Click OK to see the result. Tip: If you have several identically shot clips, save this gray so you can reuse it—click the swatch again to reopen the picker, and then drag your color from the preview area into a box in the well below the color wheel.

**4** If your video has an unwanted colorcast, use the red, green, and blue sliders to adjust shadows, midtones, and highlights. Sliders change a hue without affecting the image's brightness. Experiment: If your image is too red, for example, try moving the red sliders down. When you are happy with the clip's color, click OK.



**5** Once you're done with your color corrections, click Apply in the top-right corner of the iMovie window. iMovie will render your clip as it does with any other effect.







# iDVD 4

It may still look simple, but you can do a lot more with iDVD 4.

## FRESHEN UP YOUR THEMES

iDVD 4 ships with some great menu themes, but they can get a little stale after a while (especially when everybody and their brother are using Road Trip). For new, affordable, off-the-beaten-path themes, check out the following Web sites: [www.idvdthemepak.com](http://www.idvdthemepak.com), [www.idvdthemes.com](http://www.idvdthemes.com), [www.virtix.com/idvd](http://www.virtix.com/idvd). You'll find holiday, seasonal, vacation, wedding, and all sorts of other themes.



Celebrate good times, come on! You can find this and other themes at [www.idvdthemepak.com](http://www.idvdthemepak.com).

## PRINT ARTWORK ON A DVD

How can you give your DVDs a pro feel? One way is by printing artwork—in lieu of Sharpie chicken scratch—on the disc face. Unfortunately, DVDs are finicky when it comes to printed sticky labels—if you don't center a label perfectly on your disc (better have a very steady hand), your off-balance DVD may not play correctly in many players. Instead, buy an inkjet printer that can print directly on a disc face, such as the Epson Stylus Photo R300 (\$179, [www.epson.com](http://www.epson.com)). You can find printable DVD-R discs from vendors such as Maxell ([www.maxell.com](http://www.maxell.com)) and Verbatim ([www.verbatim.com](http://www.verbatim.com))—try Mac-friendly online shopping sites.

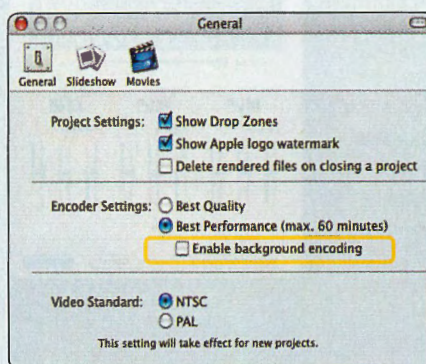
## AUTOMATE WITH APPLESCRIPT

Apple has created a bunch of free AppleScripts that you can use to automate a lot of boring, repetitive work in iDVD. All you need to do is download the scripts from [www.apple.com/applescript/idvd](http://www.apple.com/applescript/idvd). You can use these free scripts to quickly create a DVD from a folder of media, automatically create multiple menus, quickly convert Photoshop images to iDVD menu backgrounds, and much more.

## AVOID DOA DISKS

You may run into cases where your finished discs don't play properly...or at all. Problems take a number of forms: Either iDVD stops working while it's burning your disc or your disc survives the burn process but refuses to play certain parts. Usually, you can chalk up these headaches to faulty DVD-R discs. To correct the problem, try one or some of the following:

1. Make sure your blank discs are sparkling-clean before burning (no dust or fingerprints).
2. Buy DVD-Rs rated at the speed of your SuperDrive's burning mechanism. For example, a new PowerBook can only burn disks at 2X speed, so try to avoid 8X discs.
3. If worse comes to worst, use the slowest disc media you can find (DVD-Rs rated for 1X or 2X burning speeds, for example).
4. Try another brand of disc media. It sounds crazy, but some brands are more agreeable to a particular drive mechanism.
5. Open iDVD's Preferences and uncheck the Enable Background Encoding option under the General pane. Some users have found background encoding can affect a disc's ability to burn.



If your discs continue to bite the dust, turn off background encoding.

## GET BETTER-LOOKING VIDEO

If you want your video to look as good as possible, open iDVD's Preferences (choose the General pane), and change your Encoder Settings from Best Performance to Best Quality. Your burns will take longer, but you'll get the clearest, sharpest imagery. Another way to improve video quality is to



limit your DVD content to under an hour—exceeding that time causes iDVD to encode video at a lower-quality setting since it has to squeeze more video onto one disc.

## FAKE A WIDESCREEN LOOK

iDVD can't officially play 16-by-9 widescreen video—but you can fake it. Before exporting your movie to iDVD, apply a widescreen matte to it. You can do this in iMovie by using the Letterbox effect, or in Final Cut Express/Pro by applying the Widescreen filter (choose the Video Filters menu, and then the Matte submenu). The widescreen matte crops a

little imagery from the top and bottom of your movie that you probably won't even miss and gives your flick a bigger-picture feel.—HK



**Make your DVDs feel more cinematic by using the Letterbox effect in iMovie.**

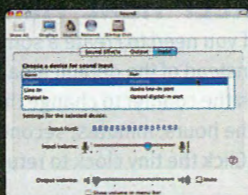
# HOW TO ADD A COMMENTARY TRACK

One of the best features of a DVD is the ability to play an audio commentary track over a movie. But iDVD doesn't let you add multiple audio tracks to a single video track. You can fake a commentary track nonetheless, using any video editing program that lets you record audio with a mic (like iMovie).—HK

**1** Import your iMovie with its normal soundtrack (that is, without the commentary) into iDVD. To do so, first go to File > Share in iMovie, and click the iDVD pane. Then in OS X's Finder, make a copy of your iMovie project file (select the file and choose Duplicate from the Finder's File menu), and open that project copy in iMovie.



**2** If your Mac doesn't have a built-in microphone or if you want to use a higher-quality microphone, try the one built into Apple's iSight camera (\$149, [www.apple.com](http://www.apple.com)). Alternately, try an external microphone attached to your Mac either via the audio-in jack or via a USB audio input like Griffin's iMic (\$39.99, [www.griffintechology.com](http://www.griffintechology.com)). If you use an external mic, set your Mac so it knows to record audio using that mic—open the Sound system preference, click the Input tab, and select the input device you want to use.

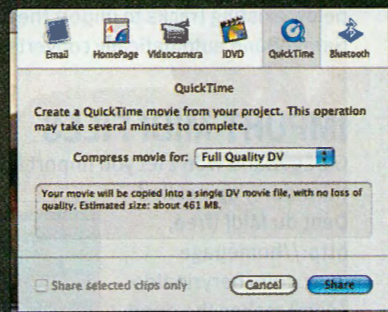


**3** Click iMovie's Audio button, and a built-in microphone recorder (a little round red button) appears. Speak into the mic to make sure your Mac is picking up its signal; if all's well, iMovie's audio level bar will react to your voice.

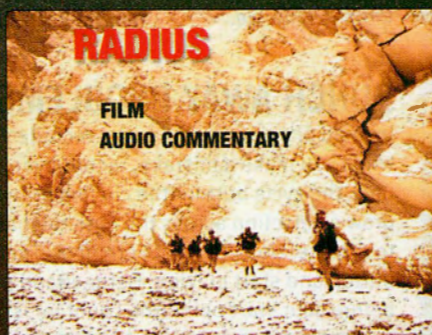


**4** Place iMovie's playhead at whatever point in your movie you want to place your commentary, and click the record button to start recording. Note: iMovie will record your voice to its second audio track, but it won't overwrite any audio that's already there. The audio clip of your commentary shares the track with existing audio clips. While recording audio, iMovie may play your video at a slower, stuttering frame rate, but it's recording your audio smoothly.

**5** Click iMovie's record button again to stop recording. Now play your movie, and listen to your commentary as it plays over your movie. You may want to turn off iMovie's other audio tracks or lower the volume of other audio clips so your voice commentary stands out. You can also use iMovie's editing tools to cut your commentary into pieces you can move around. When you're done, export your project—go to File > Share, click the QuickTime button, and choose Full Quality DV from the pop-up menu.



**6** Open your existing iDVD project, and import your commentary movie by selecting File > Import > Video. Your DVD now features two versions of your film: one with commentary and one without.







# GARAGEBAND

Here are a ton of tips and tricks for getting the most out of Apple's new music maker.

## MOVE TRACKS WITH PRECISION

To prevent you from screwing up your song's timing, GarageBand, by default, snaps tracks to a grid whenever you move tracks to or within the timeline. However, if you want to freely move tracks anywhere in the timeline, disable Snap To Grid from the Control menu.



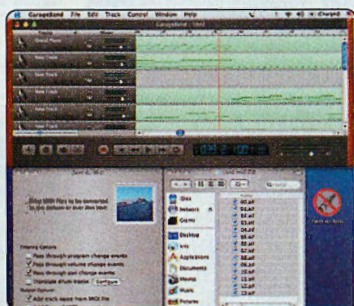
**Disable GarageBand's Snap to Grid feature to fine-tune track placement.**

## IMPORT AUDIO FILES

GarageBand doesn't have an Import command or button, but you can easily import any AIFF, MP3, or WAV audio file to your project. Just drag and drop the audio file onto the timeline below existing tracks to import the file into a new track—GarageBand automatically converts MP3 files to AIFF.

## IMPORT MIDI FILES

GarageBand won't let you import MIDI files, but a spiffy little third-party app called Dent du Midi (free, <http://homepage.mac.com/beryinaldo/ddm>) makes the deed possible. Just drag any MIDI file onto the photo in the app's interface, and DDM breaks down the file by channel into a series of AIFFs that you can drag into the timeline.



**Dent du Midi creates separate AIFF files for each channel in a MIDI file.**

## PUNCH AWAY PROBLEMS

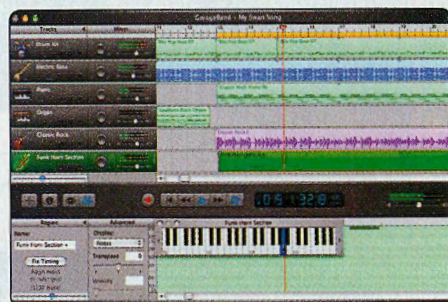
Instead of scrapping an entire recorded real instrument track when you make a mistake, record over just the bad part. Click the cycle button (the circling arrows icon), and drag to draw a selection across the time ruler above the measures to replace. Go to Control > Count In. Then click the record button and start playing; GarageBand plays the measure before your start point (the count in), starts recording, stops

recording, and then loops the newly recorded section for inspection.

## RECORD MIDI SANS KEYBOARD

GarageBand includes an onscreen keyboard if you don't want to shell out for hardware. Go to Window > Keyboard to open it, then add a new software instrument track, choose an instrument, click record, and click the keys to record a part (for specifics on how to use GarageBand, see "BYOB: Be Your Own Band," p30). If you want to record chords or add onto the part, click the cycle button, drag a cycle selection over the region, and click record; GarageBand loops the part continuously, allowing you to record additional notes that it merges with existing ones on each pass. You'll probably need to edit your notes afterward.

**Use the cycle feature to record chords and intricate passages via the onscreen keyboard.**



## KEEP REAL TIME

If you need to create a song of an exact length, display timecode instead of the default measure counter. Click the tiny note icon in the counter to change the display to timecode, which shows the hours, minutes, seconds, and thousandths of a second. (Click the tiny clock to return to the measure counter.)



**Timecode displays the real time for your song.**

## TAKE SHORTCUTS

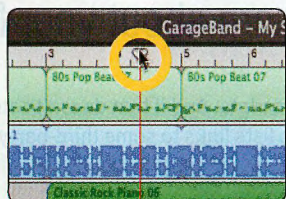
Why stress your hand and wrist with all that repetitive mousing and clicking while you audition loops and record tracks? Instead, press the spacebar to play or pause. Press R to start or stop recording. Use the left and right arrow keys to jump backward or forward, respectively, through measures. As you play loops in the loops browser, use the



up- or down-arrow to switch to the previous or next loop. For the complete shortcuts list, select Keyboard Shortcuts from the Help menu.

## POSITION YOUR PLAYBACK

You don't always want to play your song from the beginning. Rather than scrolling around the window to find the playhead and dragging it to the right spot, just click the time ruler above the timeline where you want playback to begin—the playhead automatically jumps there.



Click anywhere on the time ruler to move the playhead to that location.

## EXPAND YOUR INSTRUMENT POOL

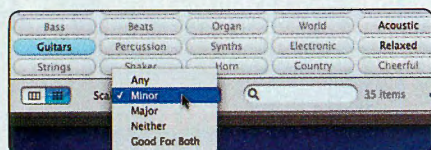
You can use GarageBand's included software instruments to breed some siblings. Highlight a software instrument track and click the track info (lowercase "i" icon) button. In the Track Info box, click the Details triangle to display its settings. Then play notes on a USB MIDI keyboard or GarageBand's onscreen one, and tweak the settings until you hear a sound you like. Click Save Instrument to add it to your arsenal.



**Want more instruments?**  
Just alter any software instrument's settings and save the hot-rodged file.

## SCALE DOWN SELECTIONS

When browsing loops, you can weed out certain selections by choosing one of the options from the Scale pop-up menu. For example, select Major if you want a more cheerful, positive-sounding song. Choose Minor if you want something sad or dark.



To narrow down loop choices, use the Scale pop-up to choose major or minor mode loops.

## PERFECT TIMING

You can't use the quantizing feature to fix the timing in real audio, but you can do a little slice and slide trick on minor problems. Double-click a recorded audio track to display its wave in the editor. Find the exact note/chord that's off-time, disable grid snapping (Command-G), move the playhead to

the beginning of the part, and select Edit > Split to slice the wave. Move the playhead to the end of the part and split again. Then align the funky up segment with a measure marker to push it on a beat.—KF



You can move this tardy guitar chord back on the beat by isolating the segment and aligning it.

## PUMP UP THE JAM

GarageBand doesn't offer plug-in support, but that doesn't mean you can't add to what GarageBand currently offers. You already know about Jam Pack (\$99, [www.apple.com](http://www.apple.com)), Apple's GarageBand companion that provides more loops, instruments, effects, and amps to your arsenal. Here are some other GarageBand-friendly packages to audition.—KF

**ACCESS MUSIC VIRUS LOOPS** (free, [www.access-music.de](http://www.access-music.de)). If you're looking for retro analog-style synthesizer pads and licks, this 20-loop package features arpeggiated lines, pads, and fat filter sounds generated from Access Music's Virus C synthesizer. Good for adding texture to dance grooves.

**BITSHIFT'S BANGIN' BEATS PROMO** (free, [www.bitshiftaudio.com/products/bbb/free\\_bee.html](http://www.bitshiftaudio.com/products/bbb/free_bee.html)). If you're a fan of breakbeat and electronic music, glom onto this collection of 41 drum and synth loops.

**DRUMS ON DEMAND, VOLUME 1** (\$49.95, [www.drumsondemand.com](http://www.drumsondemand.com)). With nearly 900 drum loops divided into 41 song sets, this great-sounding collection features real drummers playing real drum sets. The diverse grooves—from loping shuffle beats to head-bangin' metal—are enough to inspire new compositions.

**POWERFX APPLE LOOPS DISC JAMS** (\$49 each, [www.powerfx.com](http://www.powerfx.com)). Nu Jazz House features jazzy acoustic and electric instrument samples, including keyboards, guitar wah-wah, and guitar minor 7th chords. Electro Cashmatic offers modern and retro instrument samples, including drum and FX loops, pads, and vocoder. Invincible Dance packs in instrument loops to build up club and dance mixes.

**THE LOOP LIBRARY** (prices vary, [www.thelooplibrary.com](http://www.thelooplibrary.com)). This site features free loops and samples (albeit not Apple Loops), as well as royalty-free ones you can use in GarageBand by simply dragging a file onto a Real Instrument track. This site houses everything from the common (pianos, guitars) to the eclectic (Peruvian flutes, didgeridoos).





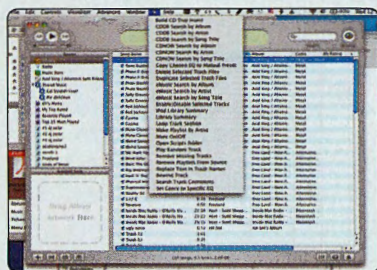
# iTUNES 4

There's still a thing or three to learn about your favorite jukebox.

## APPLESCRIPT iTUNES

For all that iTunes does, there are plenty of additional things we wish it could do—for example, better manage our Music folder or set all songs in a genre to a common EQ setting. The good news is that iTunes is AppleScriptable, so adding such functionality is a simple matter of hacking out an AppleScript. For the less geeky, Apple provides a collection of AppleScripts for iTunes, which you can download for free from [www.apple.com/applescript/itunes](http://www.apple.com/applescript/itunes). Some of the scripts do things like delete tracks for which the file is missing, or play a random song.

To add AppleScript access to iTunes, just create a folder called Scripts in your Users > *user name* > Library > iTunes directory, drop in some scripts, and iTunes will grow a new menu icon, from which you can access

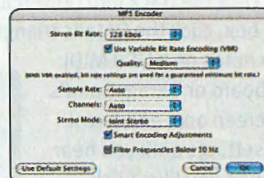


**Feed it the right scripts, and iTunes can do just about anything.**

the scripts. And if that doesn't sate the script fiend in you, Apple also lists links to some third-party iTunes AppleScripts.

## VARY YOUR BIT RATE

The bit rate, or speed at which you encode your tunes, directly impacts the quality of MP3 and AAC files—but it also affects file size and thus the number of files that'll fit on your new pink 4GB iPod mini. The Importing pane in iTunes' Preferences offers basic bit-rate presets for encoding using AAC (128 Kbps) or MP3 (128, 160, and 192 Kbps)—nice, but if you select Custom from the Setting menu, you can specify a different bit rate between 16 and 320 Kbps, or VBR (variable bit rate), which encodes different parts of your MP3 at varying bit rates, depending on the complexity of that section of audio. Note that AAC is the new standard for most music files, but in some cases—with spoken-word content, for example—VBR MP3 is still preferable.



**Variable bit-rate encoding lets you pack your music into smaller-size files.**

## FUNKAGROOVADELIC iTUNES VISUALIZERS

Want some eye candy to go with that ear candy? Then expand your visualizer selection. To add new visualizers, drag any of the following plug-ins and supporting files to your iTunes Plug-ins folder (User > *user name* > Library > iTunes > iTunes Plug-ins), launch iTunes, choose the visualizer from the Visualizer menu, and select Turn Visualizer On (also from the Visualizer menu).—NR

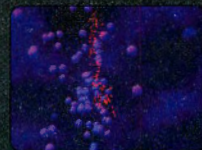
**TRINFINITY SOFTWARE'S COLLAGE** (free, [www.trinfinitysoftware.com/itunesplugins.shtml](http://www.trinfinitysoftware.com/itunesplugins.shtml)) searches the Internet for images of the band whose music you're listening to, grabs them, and creates a collage across your screen. Collage can be slow to grab images and works best with better-known bands, but these limitations don't affect music play.



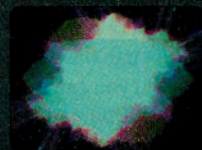
**ERIK WRENHOLT'S TIMESTRETCH VISUALIZER** (free, [www.timestretch.com/site/timestretch\\_visualizer](http://www.timestretch.com/site/timestretch_visualizer))—based on a BeOS screensaver that draws animated Julia sets (a complex math thing—just go with it)—creates beat-matched, Technicolor, somewhat-pixelated, hypnotic blobs.



**DIXIE UNLIMITED'S DXPLAY** (free, <http://dixieunlimited.com>), with its misty somber colors and spewing 3D balls, makes it look like a lava lamp exploded on your display. An upgraded version, dxPlay II, should be out soon.



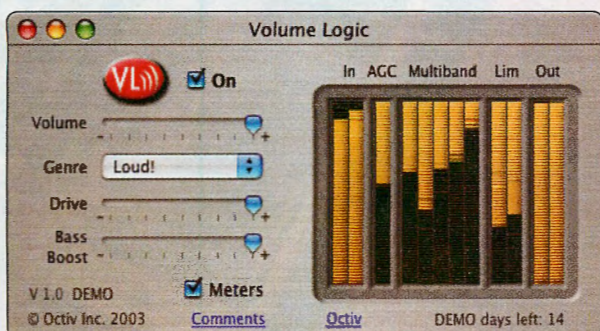
**FORREST BRIGGS' FRACTOGROOVALICIOUS** (\$10, [www.2tothex.com/fractogroovalicious.html](http://www.2tothex.com/fractogroovalicious.html)) sends fractals boogying to your beats in what looks like a Crayola-colored Rorschach test.





## MASTER YOUR SOUND LEVELS

iTunes provides a built-in graphic equalizer for customizing your playback settings, and a Sound Check feature for normalizing the overall volume across tracks. Volume Logic (\$19.95, [www.octiv.com](http://www.octiv.com)) is a third-party iTunes plug-in that provides more-advanced versions of both those functions. Volume Logic includes automatic volume-matching across tracks (and within each track—something Sound Check can't do), as well as 18 EQ presets. Mileage will vary with personal listening tastes and different types of music, so be sure to try the Volume Logic demo on this month's Disc.



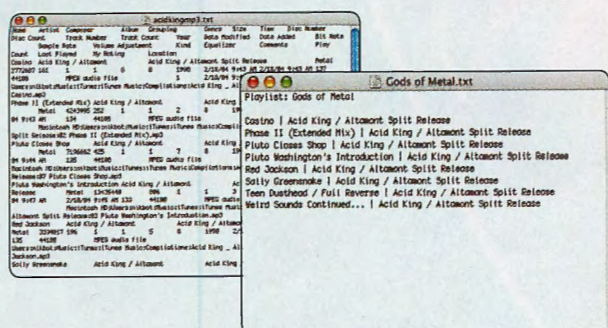
Volume Logic replaces iTunes' built-in equalizer and Sound Check.

## GET INFO IN BULK

You can enter basic track info such as artist, album, comments, and genre for multiple songs at once by simply selecting those tracks together and pressing Command-I.

## PRINT USABLE PLAYLISTS

There are tons of reasons to print out your Playlists, but iTunes' Export Song List creates a list that's too detailed and confusing for normal use. iTunes Publisher (\$5, [www.macalester.edu/~jaas/itunespub.html](http://www.macalester.edu/~jaas/itunespub.html)) lets you specify which of iTunes' copious information fields to include. Use it to export any Playlist—even your whole Library—to plain text, HTML, or even a QuickTime Streaming Server Playlist.—NC



iTunes' exported song lists (left) are basically useless; iTunes Publisher lists (right) include the information you specify.



The MacAddict staff and contributors are so ensconced in their iLives that they've forgotten they have real lives—or do they?

# OUR PERFECT WORLD

## What's still missing from iLife

While we think iLife '04 is awesome, we wouldn't be doing our jobs if we didn't point out a few missing features we'd like to see pop up in the next go-round, along with which apps you can turn to today to find those features.—NR

APP	WHAT'S MISSING	WHERE YOU CAN FIND IT
<b>IPHOTO</b>	Ability to subdivide the iPhoto Library	iPhoto Library Manager 2.0 (free, <a href="http://homepage.mac.com/bwebster/iphotalibrarymanager.html">http://homepage.mac.com/bwebster/iphotalibrarymanager.html</a> ) and iPhoto Buddy (donationware, <a href="http://nofences.net/iphotoBuddy">http://nofences.net/iphotoBuddy</a> ) let you manage multiple photo libraries.
<b>IPHOTO</b>	Simple RGB sliders for basic color correction	Adobe Photoshop Elements (\$99, <a href="http://www.adobe.com">www.adobe.com</a> ) lets you adjust the red, green, and blue channels of an image.
<b>IMOVIE</b>	Color correction beyond the Adjust Colors effect	cf/x Color Control (\$1.50, <a href="http://www.imovieplugins.com/plugs/colorcontrol.html">www.imovieplugins.com/plugs/colorcontrol.html</a> ) lets you manipulate the amount of red, green, and blue in your movie clips. Slick Volume 6 (\$69, <a href="http://www.geethree.com">www.geethree.com</a> ) lets you set white and black points, plus tweak highlights, shadows, and midtones. (See "How to Correct Colors," p23).
<b>IMOVIE</b>	Better titling effects	Stupendous Software's Big and Bold iMovieTitle Packs (\$25, <a href="http://www.stupendous-software.com">www.stupendous-software.com</a> ) lets you add a variety of animated and colored titling to iMovie. GeeThree also offers titling effects in their Slick plug-ins.
<b>IDVD</b>	Commentary tracks	DVD Studio Pro 2 (\$499, <a href="http://www.apple.com">www.apple.com</a> ) lets you attach multiple audio tracks to a video track. (Or you can fake it using iMovie—see "How to Add a Commentary Track," p25.)
<b>GARAGEBAND</b>	The ability to record more than one track at a time	Bias Deck LE 3.5 (\$99, <a href="http://www.bias-inc.com">www.bias-inc.com</a> ) supports multitrack recording for up to 12 tracks.
<b>GARAGEBAND</b>	Support for third-party plug-ins	Sagan Technology's Metro 6 SE (\$69.99, <a href="http://www.sagantech.com">www.sagantech.com</a> ), TC Electronics' Spark LE 2.8.1 (\$49, <a href="http://www.tcelectronic.com/sparkLE">www.tcelectronic.com/sparkLE</a> ), and most pro recording apps support either VST, TDM, Audio Unit, or MAS plug-ins.
<b>GARAGEBAND</b>	Ability to export to file formats other than AIFF	Most pro audio apps—such as Apple's Logic (\$999, <a href="http://www.apple.com">www.apple.com</a> ), Digidesign's Pro Tools (comes with Pro Tools systems), or Steinberg's Cubase (\$799, <a href="http://www.steinberg.net">www.steinberg.net</a> )—export to SDII, AIFF, or WAV audio formats.



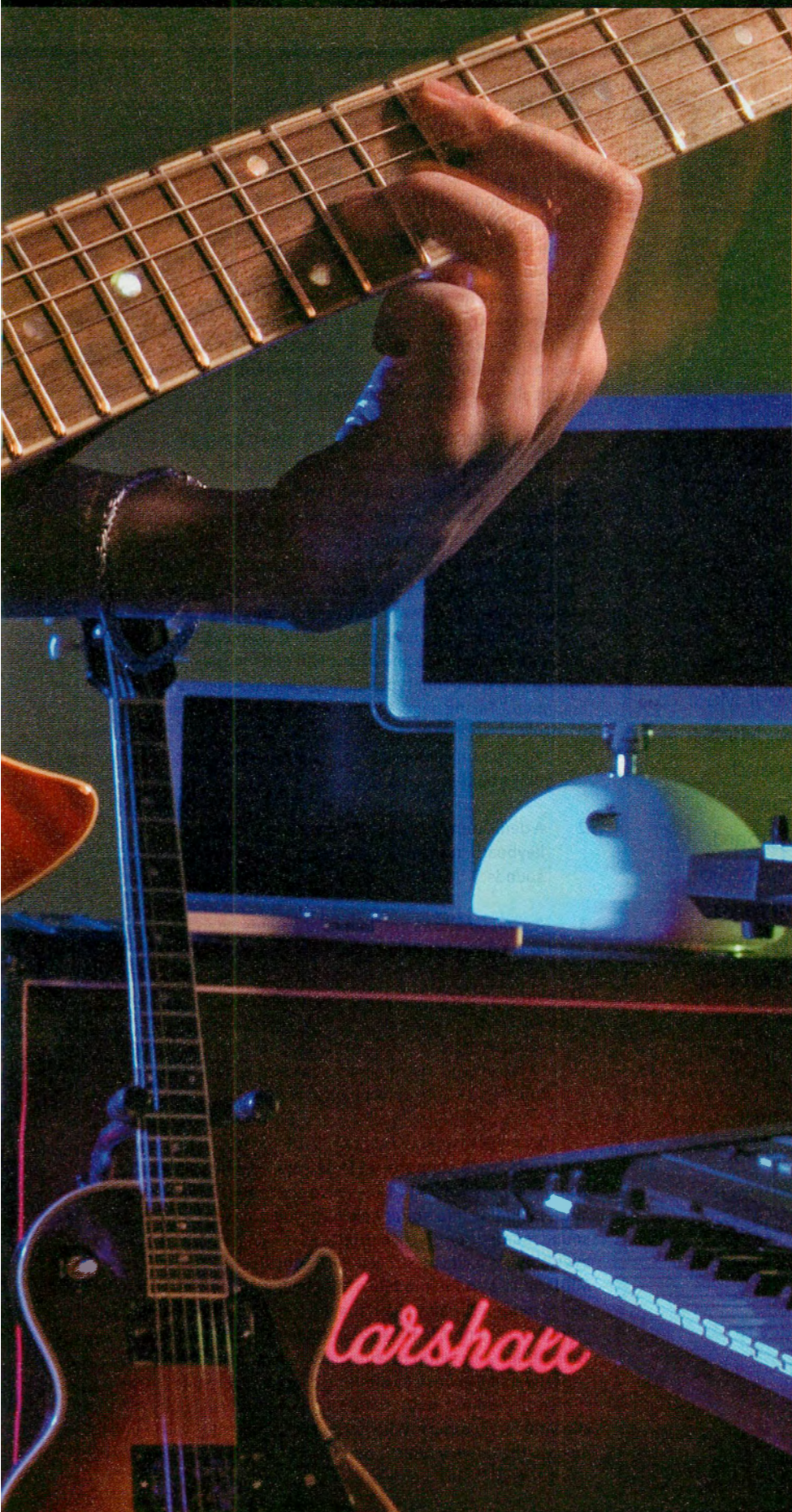


# ON THE DISC

AmpliTube X 1.2 demo,  
Deck 3.5.2 trial,  
Live 3.0.2 demo,  
Metro SE 6 demo,  
Pluggo 3.1.2 demo,  
Reaktor X 4 demo,  
Sibelius 3.1.1 demo, and  
Unity Session X 3.3.1 demo

# HOW TO MAKE MUSIC ★ ON YOUR ★ MAC





# BYOB



# BE

# ★YOUR OWN★

# BAWD

You no longer need to have musical friends and musical talent to indulge your rock-star fantasies. With a Mac, the right hardware and software, and our in-depth guide, you'll be making music in no time.

— ★BY KRIS FONG★ —  
PHOTOGRAPHY BY MARK MADEO



# GET READY TO ROCK

Whether you prefer singing your heart out on center stage or playing out your *American Idol* fantasies in the privacy of your shower, you're a lot closer to becoming a self-sufficient entertainer than you might think—all you need is your Mac.

When it comes to making music, Macs are perennial fixtures in recording and post-production studios. But with a microphone and/or USB MIDI keyboard, you can forego the expense of the studio and make your own music anywhere you take your Mac. It doesn't matter whether you're a singer, tuba player, or total music newbie—anyone can create music.

Here, we walk you through the process of recording and sequencing music: We demystify MIDI and explain why it's your new secret weapon, show you how to create music easily with Apple's GarageBand, and introduce you to some advanced recording tricks and techniques with a professional recording package. So scrape the wax out of your ears and unleash your inner rock star.

**B**efore you start rockin' out and scheduling appearances on MTV, there are a few things you need to know about making music on your Mac. For example, you need to make sure that you've got the right equipment and the software you need, and that your Mac is set up correctly to support your budding career.

The big question: How do you get instrument sounds into your Mac? If you sing or play an instrument, you can mic the sound source or—in the case of electric guitars and basses—plug your instrument directly into your Mac to record real audio. But if you lack the instruments, musicians, and/or talent to, say, record a full orchestral accompaniment, you can generate practically any instrument sound with MIDI.

## THE INS AND OUTS OF MIDI

You've probably heard of MIDI (Musical Instrument Digital Interface), but what is it and why should you care? Unlike real audio—say, a piano, an electric guitar, or a sneeze—MIDI is a protocol that transmits note information (such as pitch, length, volume, and velocity) between a MIDI controller and a module that actually generates the sound. MIDI allows you to tap into a wide variety of software instruments and play the sounds as easily as you would play a piano—for example, GarageBand's software instruments and about half of its loops use MIDI. Following are the four types of MIDI devices—see “Get Equipped,” facing page, to find out what gear you need.

- 1 A *keyboard synthesizer* is a controller that contains and plays built-in sounds.
- 2 A dedicated *MIDI controller*, such as a USB music keyboard, transmits MIDI info but doesn't generate sounds.
- 3 A *sampler* allows you to record sounds, map them to keys to create note pitches, and transmit info and sounds to and from other MIDI devices (this is how canine-loving virtuosos make dogs bark “Jingle Bells”).
- 4 A *sound module* houses sounds and allows controllers to tap into its instruments. Synthesizers and samplers function as both controllers and sound modules.

MIDI devices generally contain MIDI In, MIDI Out, and MIDI Thru ports. Each supports up to 16 simultaneous channels. When you press or pound keys on a controller, this sends MIDI info—including info about how hard you press the key—to a sound module, which then produces the sound. Connecting everything is a cinch: String a MIDI cable from a controller's MIDI Out to a sound module's MIDI In. If you have multiple sound modules, daisy chain the devices by connecting a module's Thru port to the next module's In port, and so on. Then tether your setup to your Mac via a MIDI-to-USB interface.

Software MIDI devices are replacing hardware ones (see “Software Skillet,” p40), but a MIDI keyboard controller is still vital for recording. With software-based MIDI, you won't run into the latency (delay) problems that can occur when you string together MIDI hardware.



## GET EQUIPPED

So just how do you get your guitar riffs and Sinatra stylings into your Mac? Here's what you need to connect your gear to your Mac—depending upon your musical aspirations.

**ASPIRATION:** Dude, I just want to make music with GarageBand and maybe sing something and plug in my electric guitar for fun.

**SOLUTION:** If it's just for fun, plug an instrument or nonprofessional microphone into your Mac's 1/8-inch audio input using a cable adapter (1/4-inch mono phono to 1/8-inch stereo mini phono). Check out the Monster iStudioLink (\$19.95, [www.monstercable.com](http://www.monstercable.com)). The 1/8-inch input provides 16-bit/44.1KHz CD-quality sample rates (the frequency at which a sound is sampled to convert audio into a digital form). But beware: This is a low-power, *line-level* input—mic and instrument signals need a power boost to provide full signal strength using this type of input, so your audio may sound low.

**ASPIRATION:** I need decent-but-not-pristine audio quality, and I might want to record a real demo sometime.

**SOLUTION:** A portable USB or FireWire audio interface houses input configurations for mics, instruments, MIDI, and what have you. Devices can cause latency, so FireWire is preferable if you record multiple tracks of audio. Look for interfaces with higher sample rates (24-bit, 96KHz audio is common), low-to-zero latency, and built-in preamps to boost mic and instrument signals. If you have MIDI gear, look for an interface with audio and MIDI connectors. Two companies to check out are M-Audio



The Edirol UM-1SX is a 1x1 MIDI-to-USB cable.



A 1/4-inch-to-1/8-inch adapter is a cheap way to connect a mic or instrument to your Mac.

([www.m-audio.com](http://www.m-audio.com)) and Edirol ([www.edirol.com](http://www.edirol.com)). We like M-Audio's FireWire Audiophile (\$349.95) and FireWire 410 (\$499.95) for portability. If your last CD didn't go platinum, the iMic (\$39.99, [www.griffintechology.com](http://www.griffintechology.com)) provides a 1/8-inch mic/line input via USB.

## THE MATCH GAME

When it comes to connecting gear to an audio interface, if the plug don't fit, you must quit—and find a hole that works. Here are some common audio inputs and the gear you can connect to them.

### S/PDIF

S/PDIF (Sony/Philips Digital Interface) lets you connect DAT and some home theater devices digitally for pristine sound.

### ADAT Optical I/O

This input is for hooking up an ADAT-based recording system.

### RCA

Look for this two-port stereo analog input if you want to record stuff from vinyl, tape, or radio.

### MIDI

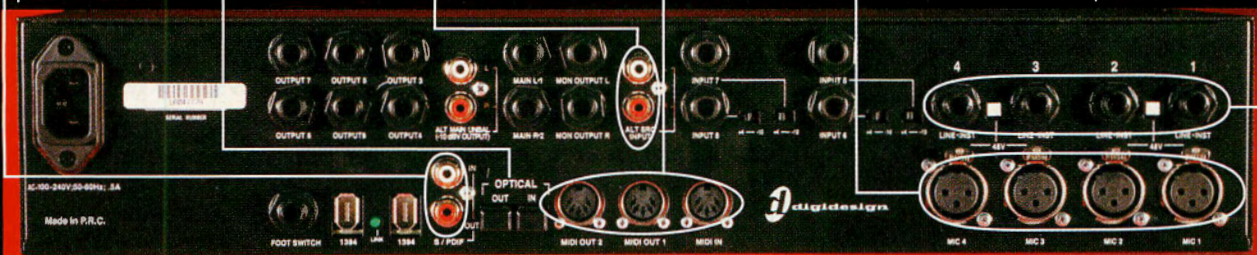
If you've got a MIDI keyboard synth, sampler, drum machine, and/or sound module, look for this 5-pin connector.

### XLR

If you've got a pro mic (not a Radio Shack cheapie), look for this 3-prong port.

### 1/4-inch TRS

These ports are monophonic. Connect 'em to electric guitars, cheap mics, old analog synths, and effects processors.







Hardware MIDI devices come in many forms, including (bottom to top) synthesizer, sound module, and drum machine.

**ASPIRATION:** I want to be Moby—but without the singing—and I've already got an old MIDI keyboard.

**SOLUTION:** If you don't plan on recording live audio, get a MIDI-to-USB interface, which enables your Mac to communicate with old and new MIDI gear. These devices range from simple 1-in/1-out cable devices (16 channels), such as the Edirol UM-1SX (\$45, see p33 for picture), to 128-channel devices, such as M-Audio's USB MIDISPORT 8x8/S (\$399.95). When you're out shopping, look for a MIDI interface with enough ins and outs so that you never have to daisy-chain together more than two



M-Audio's Ozone is the perfect all-in-one companion.

devices—otherwise you may experience latency from the last device in the chain.

**ASPIRATION:** I want to record different instruments but don't have MIDI gear—and I ain't throwing down no 500 bucks to buy a synthesizer.

**SOLUTION:** Get a USB MIDI keyboard controller, which you can use to play software instruments. This makes recording notes easier than entering them via an audio app's step editor. Even if you play badly, you can edit MIDI notes afterward. M-Audio's Keystation 49e (\$99.95) provides 49 full-sized keys while M-Audio's Ozone (\$299.95, see above for picture) features both audio and MIDI connections built into a 25-key controller.

**ASPIRATION:** I'm a serious musician and want to record my band. And if I could integrate my old ADAT recording system, that would be awesome.

**SOLUTION:** A pro audio interface provides the greatest diversity of ins and outs. Most devices feature FireWire for low-to-zero latency, and some feature connections to tether ADAT-type recording systems (ADAT stands for Alesis Digital Audio Tape; check out [www.alesis.com](http://www.alesis.com) for more info). These interfaces, such as the Digidesign Digi 002 Rack (\$1,295, [www.digidesign.com](http://www.digidesign.com)), are similar to the portable variety but generally feature higher sample rates and multiple mic and instrument/line inputs. Many come bundled with recording software—all Digidesign systems come with its Pro Tools software, while MOTU's interfaces ([www.motu.com](http://www.motu.com)) ship with its AudioDesk software.

# TUNE UP YOUR MAC

Don't press record yet! To avoid potential problems during your music session, whip your Mac into shape before you hit that first note.

**CRAM IN RAM** RAM affects the number of tracks and effects your Mac can play back simultaneously. Install at least 512MB.

**TURN OFF EXTENSIONS** If you reside in Mac OS 9, disable all extensions beyond the base set and the ones needed to run your music hardware and software.

**DUMP THE JUNK** Live audio eats up a lot of disk space—about 5MB per minute per track. Free up as much hard-drive real estate as possible, or invest in a capacious FireWire drive.

**DEFRAGMENT** Your Mac stores audio recordings all over your hard disk, which can adversely affect playback if your audio app has to jump around too much to access them. Use Norton SystemWorks (\$129.95, [www.symantec.com](http://www.symantec.com)) to defragment your drive—and do it *regularly*.

**GET A FASTER HARD DRIVE** If you're working with recorded audio, PowerBook and iBook drives spin too slowly (4,200 rpm) to play back multiple tracks; a fast-spinning FireWire drive (at least 7,200 rpm) can help.



# YOUR ★ HOME ★ STUDIO

The home music studio we put together is probably more complete than a lot of aspiring musicians need, but it might give you ideas about how to create yours. Here's what ours includes.

- ① Marshall JCM800 guitar amp (plus effects rig)
- ② Dual 2GHz Power Mac G5 and 17-inch Studio Display
- ③ Creative I-Trigue L3450 speakers
- ④ AKG and Shure microphones
- ⑤ M-Audio Ozone MIDI controller/interface
- ⑥ Roland D5 synthesizer
- ⑦ Roland Juno-60 analog synth
- ⑧ Roland TR-505 drum sound module
- ⑨ Kawai GMega sound module
- ⑩ Digi 002 Rack audio/ADAT interface
- ⑪ Soundcraft mixing console
- ⑫ Tannoy reference monitors
- ⑬ Telly Award (what your music can win you)
- ⑭ Alesis ADAT recorders
- ⑮ PA Speakers

**Blue** numbers are audio gear.

**Red** numbers are MIDI.

**Green** numbers are both.

**Black** numbers are neither.





# GARAGE ★ ★ ★ BAND RECORDING MADE SIMPLE

Not everyone was born with Lenny Kravitz's multi-instrument mastery or Paul McCartney's songwriting talent. But with Apple's GarageBand, you can accomplish both in the same manner as Britney Spears—by faking it.

## GETTING STARTED

The beauty of GarageBand is its big-daddy voodoo that makes loops play in the key and tempo you establish, despite the key or tempo in which the loop was recorded. A loop is a short segment of sampled audio (a recording of a real instrument) or MIDI (a software instrument performance) that you can string and stack together like Legos to build a song.

When you launch GarageBand, set the key, timing, and tempo in the New Project window. If you don't play an instrument, choose any key. If you're musically inclined, choose an appropriate key for your voice or instrument. The timing affects the rhythm of a song—stick with the default 4/4 time for now

(the timing for most contemporary songs). Tempo controls the speed of the beat and is measured in beats per minute (bpm).

## DRUM UP A BEAT

Drums define the timing and feel of a song. GarageBand includes a bunch of drum loops to help you build a song's rhythmic foundation (and they're free of booze-induced sloppiness too). The loop browser, which you can display by clicking the eye button, stores loops. Decide what type of song you want (rock, techno, a sappy ballad, or whatever), and then click an instrument and/or category button to display your choices (to find our drum loop, we clicked Drums, and then Rock/Blues). A green note icon indicates a software instrument loop (MIDI), and a blue squiggly icon indicates sampled audio loops.

To use a loop, drag it into the timeline. From there, GarageBand automatically creates an instrument track—each track features mute, solo, volume, and pan controls, plus a levels monitor. To repeat a loop and turn it into a longer groove, mouse over the right side of the loop in the timeline (the cursor changes into a curved arrow), and drag. Or drag in another loop (stick with the same loop family for sound consistency) to add diversity or to bridge a change in your song.

## ADD INSTRUMENT LOOPS

You can record your own bass lines, record a part with a bass software instrument, or use bass loops. If doing one of the first two options, see "Record a Performance," facing page. If doing the latter, click Bass in the loops browser to start trying on bass loops for size. To make shopping for bass loops easier, cycle your drum segment to make it play continuously. To do this, click the cycle button (icon with two arrows that form a circle) and drag across the time ruler to draw a yellow bar above a drum loop segment, then click play.

Because GarageBand transposes loops to match your key and tempo, pay attention to the bass sound—loops closer to your established key will sound better than those recorded three or four *semitones* (half steps) above or below it. Loops closer to your set tempo will play more smoothly than those GarageBand needs to speed up (some notes may not play) or slow down (notes may sound warbly). Listen to how the bass part locks with the drum pattern; the two parts should be rhythmic peas in a pod—unless you're a fan of freeform jazz. When you find a loop you like, drag it into the timeline, and then repeat the loop across multiple measures and/or drag in other bass loops to mix up the groove. Repeat for any other instrument loops.

## EDIT LOOPS

If you use a software instrument loop (remember, this is indicated by green bars), you can edit individual notes. Double-click the desired loop segment to display its note sequence in the editor. Each bar along the keyboard grid represents note pitch. The length of the bar represents note length. Black bars indicate high-velocity notes (velocity roughly corresponds to intensity). Gray bars indicate lower velocities—the lighter the gray, the softer the note. To zoom in, move the slider in the Region panel to the right.



With drum loops, each keyboard key represents a different instrument (bass drum, snare, hi-hat, and so on). Open the Keyboard window (Command-K) and click the keys to hear which key plays what instrument. To change a note's pitch (or instrument), drag its bar up or down in the editor grid. To change a note's duration, drag the bar's right side. Use the Velocity slider to change note intensity. To add a note, hold down the Command key and drag to draw a bar in the editor. You can also move notes left or right.

With sampled audio loops (blue bars), you can only alter the pitch. Double-click a loop to display its audio wave in the editor and then use the Transpose slider to alter the pitch up or down. Just remember, the more you alter the pitch, the worse the instrument may sound.

## RECORD A PERFORMANCE

So far you've built a foundation for a song, but to make it stand out, add your own melodies. You can do this by recording live audio (sing, play guitar, break out your tuba, or whatever) or a MIDI software instrument performance. Plug in a mic, a guitar or bass, or a MIDI controller (see "Get Equipped," p33), and then click the add button (plus-sign icon) to create a new track. In the resulting dialog, click Real Instrument if recording live audio or Software Instrument if recording MIDI data.

For real audio, select your instrument (or the closest thing to it) and an effects style, turn Monitor to On, and play or sing a little to hear the sound. GarageBand layers on an effects preset to enhance your instrument or voice, but if you'd rather add effects later, choose No Effects. If you're a guitarist, Amp Simulation provides crunchy or clean tones sans amp. If using a software instrument, choose an instrument, and tickle the ebonies and ivories to hear the sound.

To record your performance—whether it's live or MIDI—move the playhead to a desired start point, slap on your headphones (especially if using a mic), click the record button, and off you go. When finished, click play or press R to stop recording. To review your performance, click the track's solo button (headphones icon), and then play. If you're not satisfied, record the part again or, if you used a software instrument, right your wrong notes in the editor.

## ADD EFFECTS

Audio effects like reverb and echo can make tracks sound fuller, sweeter, or even edgier. To tweak effects, double-click a track's instrument icon to open the Track Info dialog and click the Details disclosure triangle—all currently employed effects are checkmarked. You can easily alter some effects (such as Compressor and Reverb) by adjusting their respective sliders. For others (such as Amp Simulation and Equalizer), click the pencil-icon button to open their settings. To add an effect, check an effect's check box, or choose an effect from one of the two effects pop-up menus.

We can't tell you which effect to add to what track—taste varies—but take the following tips to heart. Reverb will smooth out sounds, but if you add too much to tracks with short-hit notes, the notes will bleed together. Use the Compressor effect to even out volume inconsistencies. If a bass track sounds muffled, boost midrange frequencies using the Equalizer effect.



**DRUM UP A BEAT** Drag a loop segment across multiple measures to get your groove on.



**ADD INSTRUMENT LOOPS** To find complementary loops, cycle part of your timeline and audition different ones.



**EDIT LOOPS** We spawned three snare hits from one (via copy and paste) to create a snare fill in one of our drum loops.



**RECORD A PERFORMANCE** Record sections one at a time.



Don't drown vocals in reverb, or it'll sound like the singer is singing in a different room from the band. A short delay can beef up nonpercussive instruments. Chorus can make thin sounds richer. To squelch buzzing between guitar parts, use the Gate effect (real-instrument audio only). Add a little reverb to all acoustic instruments, so they don't sound too in-your-face.

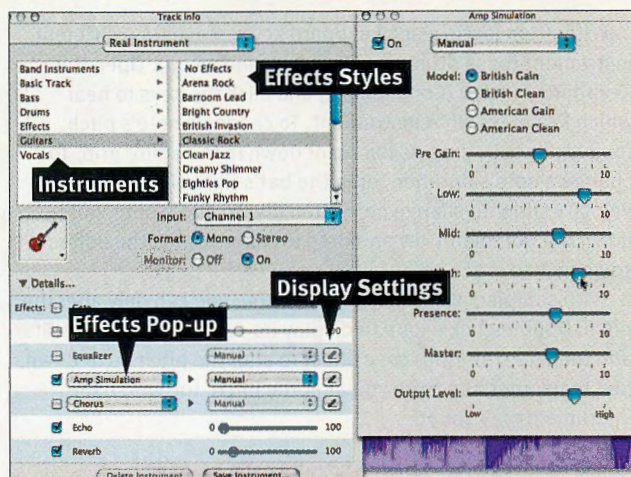
## MIX AND MASTER

After you record your tracks, it's time to tweak the overall mix. Disable looping, and use the volume slider to mute all tracks except the drums and bass. Click play and then adjust the drum track's overall volume as high as it can go without causing the level meters to go into the red zone. Then adjust the bass volume so it's on par with the drums. If you need to make multiple volume adjustments within a track, click the inverted triangle button to display the track's volume band, and click and drag along the band to raise or lower volume at specific points.

One by one, unmute each instrument track and adjust its volume to mesh with the rhythm tracks. If the song is all about groove, keep the drum and bass tracks prominent. If it's rockin', crank up the guitars or keyboards. Then unmute each vocal and instrument solo track, keeping in mind that these tracks should always dominate the overall sound.

Listen closely to the overall effects mix and adjust accordingly. If an instrument or vocal track sounds like it's in a cave, there's too much reverb; if it sounds too up-front, there's not enough reverb. If you need to adjust the master volume, press Command-B to display that track.

When finished, select Export to iTunes from the File menu. GarageBand mixes and saves your song as a stereo AIFF file in your iTunes Music Library.



**ADD EFFECTS** Amp Simulation provides sweet Eric Johnson-style guitar tones to mega-distortion Nirvana.



**MIX AND MASTER** To turn your GarageBand project into a music file, export it to iTunes.

# ★ ★ ★ SAY ★ ★ ★ WHAT

Music terminology and C&C Music Factory—two things that make you go, “Hmmm?” Luckily, we can explain the former.

**AMP/PREAMP** An amp boosts signal strength. In an audio interface, a preamp boosts mic and instrument levels to line level.

**LOOP** A prerecorded real audio or MIDI music segment (usually a few measures long) that you can string together to create an expanded groove.

**MEASURE** A division of time in music whose value is determined by the time signature. In 4/4 time, each measure contains four beats, and each beat is a quarter note.

**PAN** A control that allows you to adjust an instrument's placement in the stereo field. For example, you can record two guitar tracks, and then place one to the left and one to the right of center to widen the sound.

**SAMPLE** A short recording, usually a single instance, of a real-instrument sound. You can map a sample to a keyboard's keys with a hardware or software sampler to create pitches, thus turning the sample into a software instrument.

**SAMPLE RATE** The frequency at which a sound is sampled to convert

audio into a digital form. The higher the sample rate, the more accurate the sound.

**SOFTWARE INSTRUMENT** A sound file modeled after or sampled from a real instrument that you can melodically manipulate with a hardware or software MIDI controller.

**STEP EDITOR** If you don't have a MIDI controller, you can place note pitches (bars) across this keyboard grid to create music with software instruments.

**TIMBRE** The distinctive quality of a sound—what makes a flute sound different from a flugelhorn, for example.

**TRACK** An audio channel. When recording, each track typically holds one instrument's sound.



# ★ ADVANCED ★

# AUDIO

## TAKING THE NEXT

# STEP

While GarageBand enables everyone to make their own music, high-end audio apps, such as MOTU's Digital Performer (\$795, [www.motu.com](http://www.motu.com)) and Apple's Logic Pro (\$999, [www.apple.com](http://www.apple.com)), provide exhaustive audio-editing tools to make even mediocre musicians sound godly. Here we use Digital Performer to show you what you can do with some of these higher-end tools.

### PUNCH TO PERFECTION

When it comes to recording real audio and MIDI performances, high-end apps work similarly to GarageBand but let you record more than one track at a time. They also allow you to set punch points in a song to automate a recording. Known as *punch-in recording*, this method is widely used to record over mistakes, big and small—even those as short as one note.



**PUNCH TO PERFECTION** Punch points help correct errors.

The *punch-in* point is the moment at which you want the audio app to start recording. The *punch-out* point is the moment at which you want to stop recording. To set up a track for punching, record-enable the desired track, and click the auto-record button to display the punch-in and -out points. Drag the punch-in marker to a start point in the time ruler (aim for an area without a lot of notes). Likewise, drag the punch-out marker to the stop point. Then move the playhead at least a couple of measures before the punch-in point and click record. Start playing—the app automatically engages and disengages recording at the points you set.

### RIGHT WRONG NOTES

Certain singers sound great on an album, but when you see them live, you begin to wonder if they could hit one right note if it sat an inch away. Welcome to the world of pop idol-dom. With today's recording technology and the wizards who use it, many singers' flawless performances come courtesy of a little note-bending, time-stretching trickery.

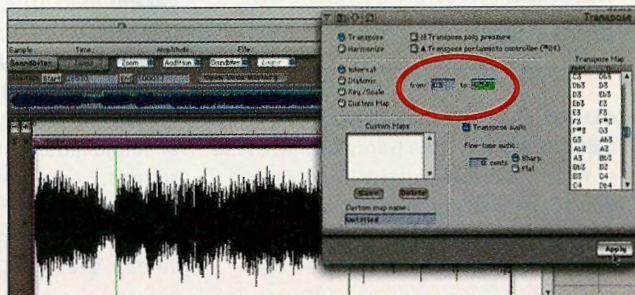
To fix a sharp or flat note in a vocal track, two things need to happen—you must define the amount of pitch-shifting you need, and you need to time-stretch the results so the transposition doesn't change the note's timing or the timbre of the voice. In other words, you don't want the singer to suddenly sound like the Chipmunks—or Lurch.

Many high-end apps feature transposition tools, which automatically time-stretch parts according to your pitch change. In Digital Performer, the Pure DSP Pitch Shift transposition filter fixes blunders. Just open the vocal track's audio wave in the wave editor and drag a selection over the offending note. Then open the Transpose window, select a shift value type (Interval, Diatonic, Key/Scale, or Custom Map), enter a pitch-transposition value in the To box, and click Apply to transpose the note while preserving the timing.

### GET THE SCORE

A notation editor lets you generate and edit MIDI parts by writing notes, rather than moving bars around as you would in a step editor.

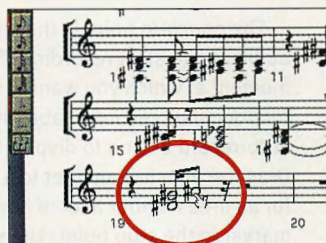
Digital Performer features a notation editor for editing notes and the QuickScribe Editor to write music using note values and dynamics. To write out a part, assign a virtual or MIDI instrument to a track and open up the QuickScribe Editor—you can also select an existing MIDI track and open it in QuickScribe. The editor features staves where you can enter



**RIGHT WRONG NOTES** Increasing the pitch value one semitone made our flat note sound pitch perfect.



notes (by default, all measures contain full rests until you plug in notes), and a toolbar full of note values and accidentals. Select a note, then click a staff line or space in a measure to enter it. To create intervals or chords, click notes directly above one another. To correct mistakes, select the arrow tool and push the wayward note to the right line or space.



**GET THE SCORE** If you make a mistake, give it the finger and push the note into place.

## AUTOMATE MIXES

Unless you buy a compatible MIDI control surface that provides real fader, knob, and button controls, you face trying to control the software equivalents with your mouse as you mix a song. Thankfully, high-end apps feature mix automation—you manipulate software buttons, faders, and knobs during playback, and the software records your settings on the fly. You can automate volumes, mute, unmute, pan, engage and bypass effects, and more.

Record-enable a track in the mix window, and select an automation mode. Choose Overwrite to record everything you do the moment playback starts—use this whenever you want to start from scratch. Choose Latch to start recording the



**AUTOMATE MIXES** In Touch automation mode, mix recording kicks in the moment you touch a control.

moment you start fiddling with a control—use this when you want to keep the mix you did toward the beginning and alter stuff midway through to the end. Choose Touch to record only your actual movements—use this to fine-tune the mix. Then start playback from the beginning and mix to your heart's content. When you finish a track, disable recording, and repeat the process with other tracks. When you're done, play back the song from the beginning and mix to your desired source. ■

## ★★SOFTWARE★★ SKILLET

Once you become better versed in music creation, here are some common varieties of audio apps to explore. To test drive audio apps, check out OS X Audio ([www.osxaudio.com](http://www.osxaudio.com)) and Shareware Music Machine ([www.hitsquad.com/smm/mac](http://www.hitsquad.com/smm/mac)).

### CONSUMER RECORDING/

**SEQUENCING** Like GarageBand, these provide basic audio and MIDI tools if you don't care a whit about hard-core wave editing and manipulation. Both Cubase SE (\$149.99, [www.steinberg.net](http://www.steinberg.net)) and

Metro SE (\$69.99, [www.sagantech.biz](http://www.sagantech.biz)) provide more editing tools at a good price. If you don't mind Mac OS 9, Pro Tools Free is, well, free (download from Shareware Music Machine).

### PROFESSIONAL RECORDING/

**SEQUENCING** These provide everything you need to record, edit, sequence, and mix audio and MIDI—even in surround sound. They also support plug-ins. Digital Performer, Logic Pro, Cubase SX (\$799), and Deck (\$399, [www.bias-inc.com](http://www.bias-inc.com)) are the biggies. If you buy a Digidesign system, you get Pro Tools for free, but you need a hardware-based Pro Tools|HD system to get Pro Tools TDM (\$10,000 and up).

### SOUND GENERATORS/

**SYNTHESIZERS** The software equivalent of a keyboard synthesizer or sound module, these apps generate sounds. Some provide simple synthesizers; others contain virtual instruments. For good instrument variety, check out Unity Session

(\$499, [www.bitheadz.com](http://www.bitheadz.com)) and packages from Native Instruments ([www.nativeinstruments.de](http://www.nativeinstruments.de)). To build your own instruments and effects, nothing tops Native Instruments' Reaktor (\$559).

### SAMPLERS AND SEQUENCERS

These apps allow you to sample audio, generate loops, map samples to keys, and sequence the sounds to create music—just like hardware samplers. You can also create music on the fly for live performances. Reason (\$499, [www.propellerheads.se](http://www.propellerheads.se)) and Live (\$399, [www.ableton.com](http://www.ableton.com)) are the leaders.

### AUDIO PLUG-INS

Plug-ins come in different formats (VST, MAS, Audio Units, RTAS, and TDM) and flavors (audio effects, software instruments, and samplers). We like Pluggo (\$199, [www.cycling74.com](http://www.cycling74.com)), a collection of effects and synthesizers; AmpliTube (\$399, [www.ikmultimedia.com](http://www.ikmultimedia.com)), which contains 1,260 guitar amp emulations; and audio processing effects from Waves ([www.waves.com](http://www.waves.com)).



Senior Editor Kris Fong recently replaced her bandmates with software equivalents. She appreciates the performance consistency—and the extra beer.



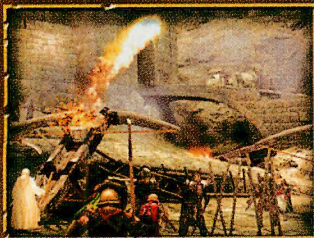
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Here are a few of our ground-breaking accessories to add to your Griffin wish list. From the drop dead beautiful PowerMate to the classic iMic, we set the standard for the coolest Mac stuff in the world.



## PowerMate \$45 USB MultiMedia Controller Knob

- New GarageBand settings included
- Great control for iTunes or iMovie
- Programmable for any application
- Replaces repetitive keystrokes



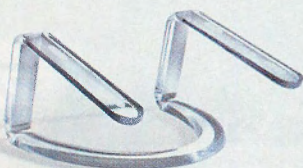
## iTrip \$35 FM Transmitter for iPod

- Play your iPod through any empty FM radio station from 87.9 to 107.9
- iPod powered - no battery necessary
- Fits beautifully to top of iPod - no messy cables or hanging dongles



## iMic \$39<sup>99</sup> USB External Sound Card

- Adds stereo audio inputs & output to any USB equipped Mac or PC computer
- Includes everything needed to record albums and tapes to make MP3s & CDs
- Plug-and-Play simple, no install required

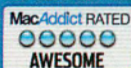


## iCurve \$39<sup>99</sup> PowerBook & iBook Stand

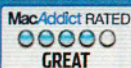
- Raises laptop screen to a more comfortable eye-level height
- Creates room on the desktop for an external keyboard and mouse
- Keeps laptop cool with complete 360 degree air circulation

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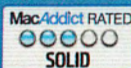




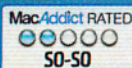
You'll be  
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You'll be  
satisfied.



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disappointed.



You'll be  
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Feast your eyes on the biggest thing to happen to little MP3 players since the original iPod: the iPod mini. Other semirevolutionary hardware we saw this month includes backup drives equipped with media-card readers, a Mac-to-TV digital-media player, a portable hard drive that thinks it's a space heater, and a Bluetooth-enabled digital camera that is—diplomatically speaking—ahead of its time. In the near future, we'll see what's new with Studio Artist, one of the most dangerous (good dangerous) art applications known to Mac users.

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63 The best of the best from recent reviews.



Compatible with  
Mac OS X or later.



Compatible with  
Mac OS 9 or earlier.



We'd spend our  
own hard-earned  
money on this  
product.



# Vue 4 Professional

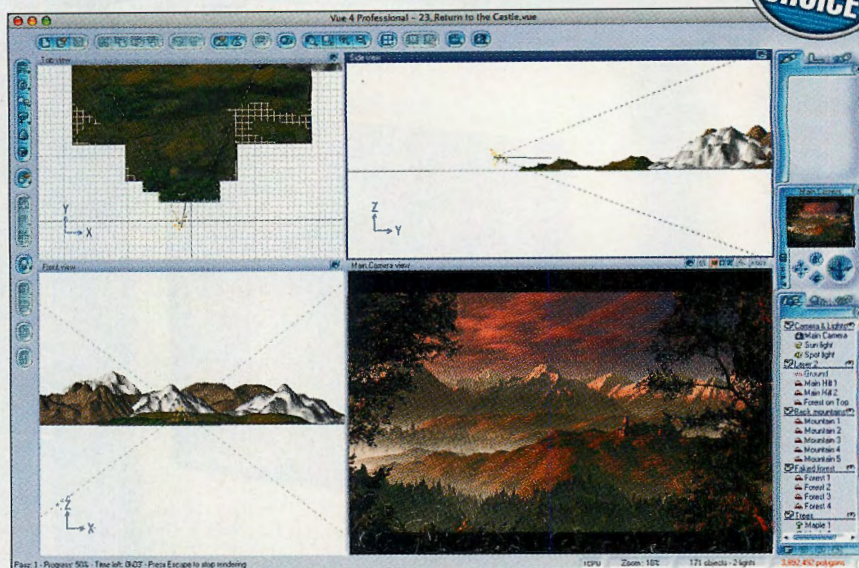
GORGEOUS 3D SCENE GENERATOR

Creating natural 3D scenery—from a simple wooded glen to a galaxy—is an art, but the Vue product line makes it an easy one. Detailed mountains, rippling water, and lush vegetation are a few mouse clicks away, and the rendered scenes look superb. Vue 4 Professional provides features pros want, such as customizability, interapplication compatibility, and network rendering.

Vue 4 is chummy with other 3D apps. It can export any object, including terrains, trees, and plants, to Alias's Maya, Maxon's Cinema 4D, and NewTek's LightWave 3D. This is a great time-saver, especially for creating plants and trees, which can take forever to model by hand. You can export entire scenes, including the sky, to LightWave 3D and Discreet's 3ds max. We had to do a little bit of rescaling and texture adjustment to get our scene into LightWave 3D, but the quality of the end result was more than satisfactory.

Interapplication synchronization of camera and lights is a huge new feature in Vue 4. We set up a scene in LightWave 3D that involved a camera dolly through and panning across the scene while keeping the lens aimed at a couple of banking spaceships. To send camera and light information to Vue 4, all we needed to do was select the newly installed synchronization plug-in in LightWave, choose the objects to which to sync cameras and lights, and click the Synchronize Data button. When we launched Vue 4 and created a new scene, a dialog came up letting us know a synchronization file was available. The process couldn't have been any simpler. We rendered a QuickTime movie of the ships with a transparency channel in LightWave, rendered a terrain in Vue 4 using the synchronized data, then combined the two in Adobe After Effects for a seamless composite.

To speed up Vue's rendering, you



Vue Professional's interface shows Top, Front, and Side views along with the Main Camera view (above). We built the background in Vue, then imported the ships from LightWave 3D—camera and lighting information included (left).

update that'll fix this problem is in the works; hopefully it'll be ready by the time you read this.

can set up a render farm on your local network using up to five machines (Mac and/or PC), per the Vue 4 Professional license. You install the included RenderCow app (render farm...cow...get it?) on each machine, and when you initiate a rendering job in Vue 4, it sniffs out all the networked Macs automatically via Rendezvous, distributes the files, and gets all of them working for you. Our basic network didn't require any configuration. We did run into one problem, however: It crashed when data for synchronization of camera and lights was present. The company's tech support promptly acknowledged this issue and told us an

Our main complaint with Vue 4 is that e-on software insists on using its own installer app rather than employing the familiar Installer VISE or Mac OS X's Installer. We've had a similar beef in the past with e-on's more entry-level product, Vue d'Esprit. We wish the company would focus on functionality over aesthetics when it comes to installers.

Vue 4 is an affordable, high-quality, natural-scene-creation app that works superbly on its own or as an add-on to other traditional 3D apps. The price point is well within the prosumer realm, and quite a bargain for pro 3D houses. For natural 3D work, there is no better tool.—Andrew Tokuda



**COMPANY:** e-on software  
**CONTACT:** [www.e-onsoftware.com](http://www.e-onsoftware.com)  
**PRICE:** \$599

**REQUIREMENTS:** 1.25GHz G4,  
Mac OS 10.2, 256MB RAM (512MB  
recommended)

**GOOD NEWS:** Rendezvous-based network rendering  
a no-brainer. Easy and effective camera and light  
synchronization.  
**BAD NEWS:** Annoying custom installer. Minor bugs.

**MacAddict RATED**  
★★★★★  
**GREAT**



# iPod mini

## CUTE LI'L MP3 PLAYER

If you're a spreadsheet type, then you've probably already computed—and scoffed at—the cost per megabyte that you pay for the iPod mini. That's because for \$50 more, you can get 11 extra gigs of space just by buying the low-end full-size iPod. But for those of you who are all about looks, size, weight, and coolness factor, the iPod mini is a must-have gadget.

We don't recommend an iPod mini if you want to tote boatloads of digital music—meaning way more than 1,000 songs, which is about what the mini can hold on its 4GB CompactFlash-card-size Hitachi hard drive. We also don't recommend the mini if you want your iPod to double as a FireWire hard drive for toting large files around.

We do, however, recommend the iPod mini for those of you with active lifestyles, whether you use it when you exercise, are a student on the go, or travel a lot and want to lighten your load. At 3.6 ounces, it's at least 2 ounces lighter than any full-size iPod—that's significant when you're running five miles. It's also much smaller than the iPod, measuring 3.6 by 2.0 by 0.5 inches, which makes it a much more comfortable fit in your hand. With its anodized aluminum body, the mini also has a more durable exterior that fares better in a backpack.

The mini features a touch wheel, just like the white iPod, but the mini's buttons are located on the wheel rather than above it. This not only keeps down the size of the device but is also more intuitive—push right to skip to the next song, left to skip backward. As with the iPod, all you have to do is plug the mini into your Mac via the FireWire connector—USB 2.0 only supports



Finally, some worthy competition for the iPod maxi—sort of.

## WHAT YOU GET AND WHAT YOU DON'T

For \$249, you get the iPod mini and a few accessories, including the following:

- ▶ Belt clip
- ▶ Earbuds with two sets of foam covers
- ▶ iPod Dock connector to FireWire cable
- ▶ iPod Dock connector to USB 2.0 cable
- ▶ Power adapter

Unfortunately, you'll have to cough up extra dough to get the following accessories:

- ▶ iPod mini Dock, \$39
- ▶ iPod mini Arm Band, \$29
- ▶ iPod Remote, \$39

hard-disk mode on Macs, not iTunes connections—and iTunes will pop open and start syncing your music (you might need to install the included software first if your copy of iTunes is not up to date). Of course, you can turn automatic syncing off if you'd rather do your music copying manually.

We torture-tested the mini by bringing it into our company gym, which is rife with sweaty geeks. The mini held its own on the elliptical and the treadmill, as well as on a vigorous outdoor run—plus it made us look much cooler than we are. The included

**A must-have gadget if you're into looks, size, weight, and coolness factor.**

belt clip is so well made that it didn't bump around excessively or make our gym pants sag too much. Serious runners will want to buy an armband, though, whether it's Apple's overpriced \$29 deal (see "What You Get and What You Don't," below) or a third-party option.

Like its bigger sibling, the iPod mini features 25 minutes of skip protection and an 8-hour battery life on the rechargeable Lilon battery. The mini didn't skip once during our testing, although we didn't quite get the advertised 8 hours—more like 7 hours and 45 minutes. By the way, turning off all extra settings, like EQ and backlighting, preserves precious battery power.

If you have an active lifestyle, the iPod mini is the best combination of portability, good looks, great sound, and respectable capacity. It may not be cheap, but the pleasure it will give you is priceless.—Cathy Lu

**COMPANY:** Apple  
**CONTACT:** 800-692-7753,  
www.apple.com  
**PRICE:** \$249

**REQUIREMENTS:** Mac OS 10.1.5  
or later (10.3 recommended), built-in  
FireWire port

**GOOD NEWS:** Sturdy yet light. Looks great. Performs well for active types.

**BAD NEWS:** Expensive. Hard-drive-based players not as durable as flash-memory players.

**MacAddict RATED**  
GREAT

X



# Avid Xpress Pro

STIFF VIDEO-EDITING COMPETITION FOR FINAL CUT PRO



Xpress Pro gives you much of the Avid family's best stuff—including top-tier color correction—but only one choice in video formats: DV.

Avid practically invented digital video editing in the '90s, and the company's gear still cuts the vast majority of big movies, TV shows, and commercials you see these days. But until recently, the prospect of affording an Avid setup, for many editors, meant selling off a kidney. But Xpress Pro now delivers many of the Avid family's best features for \$1,695. The only catch: As with Apple's \$299 Final Cut Express (see p48), you have to work with media in DV format—that is, shot on either DV tape or another format (such as film) that's been converted to DV for editing. Apple's \$999 Final Cut Pro 4 (see *Reviews*, Sept/03, p50), by comparison, works with SD (standard definition) and HD (high definition) video in addition to DV.

Despite inhabiting the lower end of Avid's product lineup, Xpress feels pretty darn high-end. For starters, it contains every imaginable tool for editing video, whether you're adding, extending, trimming, splitting, or moving video clips. There's also support for 24 video tracks (good for compositing multiple effects) and 24 audio tracks.

Like Final Cut Pro, Xpress features real-time previews of its 115-plus keyframeable, customizable effects—you can crop, color correct, distort, scale, and move video clips without rendering them first. If you apply multiple effects, your Mac may start dropping frames as it plays the effects, or it may show the effects in a lower resolution. However, our 1.25GHz

PowerBook managed to apply three or four effects at a time without a hitch. One drawback: Xpress can't show real-time previews over a FireWire connection on a FireWire-equipped TV monitor like Final Cut Pro can (unless you pony up another \$1,695 for Avid's Mojo—see "Good Mojo," facing page).

Xpress's color-correction tools are as good as they get. You can use a pro set of signal monitors to measure color fidelity (Y waveform, YC waveform, vectorscope, and others), but more useful to mere mortals is Xpress's new AutoCorrect feature, which adjusts all shots in a sequence with a single click; Xpress automatically tweaks each clip's black and white levels to fit within legal limits for NTSC broadcasts,



**COMPANY:** Avid Technology  
**CONTACT:** 800-949-2843,  
www.avid.com  
**PRICE:** \$1,695

**REQUIREMENTS:** 867MHz G4, Mac  
OS 10.2.4 or later, 512MB RAM, 40GB  
disk space

**GOOD NEWS:** Best-of-breed color correction.  
Project compatibility with higher-end Avid systems.  
**BAD NEWS:** Pricier than Final Cut Pro. Provided  
companion apps are a hodgepodge.

**MacAddict RATED**  
●●●●●  
**GREAT**



saving you mucho time. Plus, you can use multiple frame windows and split frames to manually match shots, and Avid's unique NaturalMatch feature makes short work of matching skin tones between two clips.

There are plenty of other nice touches in Xpress. For example, you can customize the interface's window buttons and assign keyboard commands. There are also extensive media-management tools for consolidating finished projects, including a great multicamera editing tool that syncs up four camera angles of the same shot; a 15:1 offline resolution that makes the most of small laptop hard drives; image stabilization; tons of real-time audio effects; and support for Panasonic's popular AG-DVX100 24p DV camera, which shoots video at the film standard of 24 fps instead of NTSC video's 29.97.

Then there's Xpress' posse of extra software. Highlights include Boris Graffiti LTD for creating animated text titles, Sorenson Squeeze 3.1 Compression Suite for encoding video for the Internet, and Avid FilmScribe for creating film-negative cut lists (in case you want to export your movie back to film). These apps independently do their jobs well, but they don't gel like Final Cut Pro's sidekick apps (Compressor, LiveType, and Cinema Tools) do. Avid's offerings are more of a hodgepodge from different vendors—the interfaces vary, and the apps aren't well integrated. Also, Xpress still has no answer to Final Cut's Soundtrack for easy music creation, Compressor's ability to export video for DVD, or LiveType's ability to mix and match type effects.

Xpress's trump card, however, is that

**Xpress includes the mighty Sorenson 3 Pro codec, which is your best bet for high-quality Web exports—better than Apple's Compressor MPEG-4 encoder.**



it's compatible with all of the other Avid rigs already out there. This is helpful if you want to edit projects in DV video, and then assemble and output your final project in a higher-quality format such as DigitalBeta (the standard format for broadcast TV)—you would copy your DigitalBeta master tapes to DV tapes, edit those DV tapes via Xpress, and then take your Xpress project file to a high-end Avid rig that can capture uncompressed video (there are tons of Avid setups to be found in rental suites across the planet). You would then use that Avid setup to automatically recapture and quickly reassemble your edited video from the DigitalBeta master tapes, not the DV copies. This is high-end stuff.

Xpress also shares a near-identical interface with other Avid setups—a big deal if you want to be eligible for all the Avid-based work that gets done in the world today. You can even load custom interface preferences you save in Xpress on other Avid setups.

But Xpress's membership in the big, happy Avid family is also its biggest weakness, because Avid can't give Xpress too much power without stealing thunder from its more expensive gear.



**Avid software is highly tweakable: You can assign custom keyboard commands and change the look of the interface down to button styles and background colors.**

Case in point: Xpress can't work natively with video in HD format (the future of broadcast TV and movies), and it can't adequately work with uncompressed SD video either (see "Good Mojo," below, for a \$1,695 workaround). Final Cut Pro 4, by contrast, lets you build a system to handle those formats relatively cheaply. For example, you can put together a Final Cut Pro–based, HD-capable hardware-and-software system for about \$20,000—a comparable Avid setup would cost almost twice that much.

If you work with DV video, however, you'll be psyched by Xpress. It's a rich, powerful editor—and if fitting in with the rest of the Avid world is important to you, it's the best choice.—*Helmut Kobler*

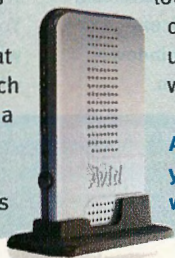
## GOOD MOJO

Avid's Mojo (\$1,695, [www.avid.com](http://www.avid.com)) is a sexy 1.5-pound, book-sized box that, among other things, lets Xpress capture, edit, and output standard-definition, uncompressed video—that is, better-looking video than DV, which is compressed at a 5:1 ratio and has a limited color space.

You attach Mojo to your Mac's FireWire 400 port. Then, using Mojo's

S-Video and composite I/O connectors, you can attach an analog video source, such as a Beta SP tape deck or camera, to capture and record video. These low-end connectors tend to cancel out the benefits of uncompressed video, so if you want higher-end connectors,

**Add Avid's Mojo converter to your setup, and you can work with raw, uncompressed video.**



you need to pay another \$75 for the "professional I/O cable option." There's unfortunately no way to add a crème-de-la-crème serial digital interface.

Mojo outputs all of your video to a TV in real time and can mix uncompressed and DV media in the same Xpress sequence without losing uncompressed quality. For example, if you combine DV footage with an uncompressed title graphic, you don't have to render the effect in DV.



# Final Cut Express 2.0.2

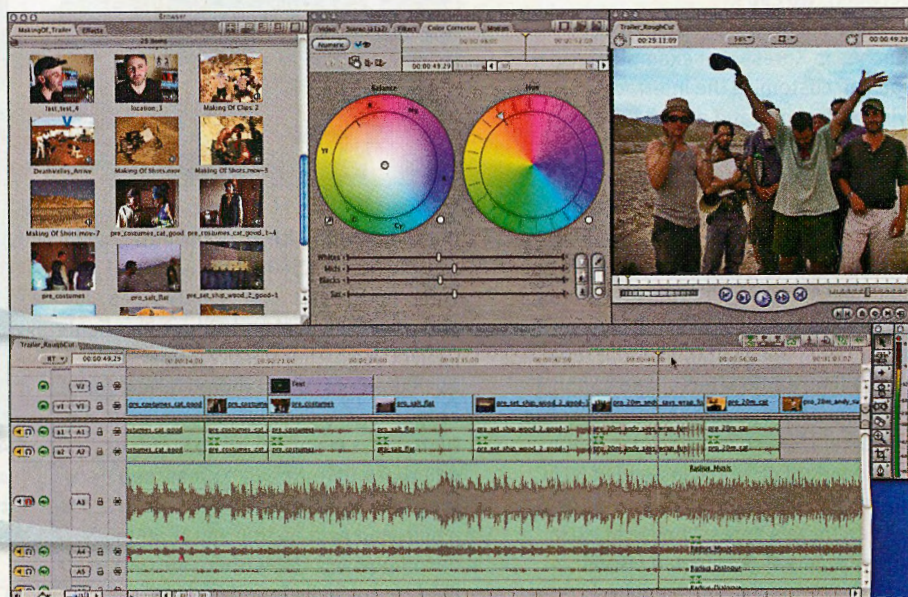
MORE-PRO-THAN-'SUMER VIDEO-EDITING SOFTWARE



A green bar over any effects clip indicates it can preview in real time without skipping frames. The orange bar over any effects clip means Express may have to drop some frames to play the preview.

Solo and mute icons help manage audio tracks.

You can resize tracks individually by simply clicking and dragging a track's border.



Final Cut Express 2 looks just like yesteryear's model—until you look a little closer.

It's tempting to think of Final Cut Express as the Jan Brady of Apple's video-editing lineup—a middle child, positioned between the free, supereasy iMovie and the hard-core editing force of nature, Final Cut Pro. Unlike Jan Brady, though, Express is a middle child with very few hang-ups, blending a great assortment of editing tools at a \$299 price that almost anybody can afford.

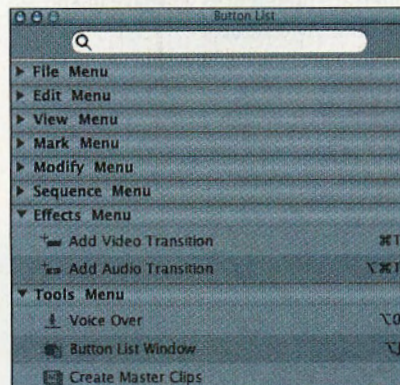
Express packs most of Final Cut Pro's best features, such as sophisticated editing tools for creating ripple and roll edits, and slips and slides. There are multiple editing tracks to work with—up to 99 video and 99 audio tracks—plus dozens of video filters for effects, including tints, blurs, color-correctors, blue/green screen keys, and so on. In addition, Express includes audio filters for noise reduction, reverb, equalization, and compression/expansion. Express's interface is a carbon copy of Final Cut Pro's, so you can step up to the bigger iron with little or no learning curve.

So what's new in 2? The biggest

improvement is that you can now see real-time previews of *any* video effects, no rendering required—you can even watch the previews on an attached TV via a FireWire connection instead of onscreen in Final Cut's display windows. Also, Express can preview multiple effects at once, say, blur, tint, and matte—but if your Mac can't

provide the processing required for the combination you choose, it will drop the framerate of the preview, playing it a bit herky-jerky. If you want to preserve smooth framerates, you can manually lower the resolution of your real-time previews (there are low, medium, and high options), which buys you some leeway. Still, even jerky, low-resolution previews can save you from wasted rendering time when experimenting with different effects or when fine-tuning effects and video composites. What's more, Express's preview magic applies to audio filters as well, so you can listen to your audio adjustments immediately, without rendering sound.

Express's interface got a polish too. You can now make a single track on your Timeline bigger or smaller without affecting the size of other tracks—say, to see an audio waveform in detail while keeping other tracks unobtrusive. You can also solo or mute audio tracks with a single click, which is handy when you're mixing audio and need to



Express sports a custom button icon—which you can add to any major window—for every feature in the application.



**COMPANY:** Apple  
**CONTACT:** 1-800-692-7753,  
www.apple.com  
**PRICE:** \$299 or \$99 (upgrade)

**REQUIREMENTS:** 350MHz G4 (500MHz G4 or 550MHz PowerBook G4 for real-time previews), Mac OS 10.2.5, 384MB RAM (512MB for real-time previews)

**GOOD NEWS:** Tons of powerful editing and compositing features. Real-time previews.  
**BAD NEWS:** No media management. No keyframing of filter effects. No more G3 support.

**MacAddict RATED**  
**AWESOME**



isolate tracks quickly. Finally, Apple has designed a handy icon for every Express feature, and you can add these icons to any window as Favorites, so you can just click the icon to invoke the feature instead of combing through a bunch of menus.

So what can't Express do that the bigger Pro can? For starters, Express *doesn't* ship with Apple's appealing trio of sidekick applications: Soundtrack for musically scoring your videos; LiveType for creating slick, animated titles from easy building blocks; and Compressor, which lets you encode your videos for Internet and DVD formats. On the other hand, you can buy a copy of Soundtrack for \$199 if you need it; Express has solid text-titling features already built-in; and while Compressor is handy for encoding lots of video in automated batches, you can still export all the important formats from Express manually.

Some other limits to ponder: When capturing video, Express still won't let

you log more than one clip at a time, and then batch-capture them while you grab a latte down the street. Instead, you have to capture video either one clip at a time or as one fat inefficient chunk, and then use the DV Scene Detect feature to break that chunk into individual scenes. Fortunately, Express 2 can now ignore timecode breaks in your tape, which used to abort the capture. Also, Express is strictly a DV app, with no support for HD or uncompressed SD video.

If you're hot for visual effects and compositing, you'll probably strain at the bit as well. While Express ships with tons of video filters (the same ones as Final Cut Pro), you still can't apply keyframes to control filter effects over time—just set one level, and that's it. You *can* keyframe motion effects, though—image scaling, rotation, position, crop values, and opacity—but it's not a very intuitive process because you can't actually see the keyframes you set.

Finally, Express can't properly archive

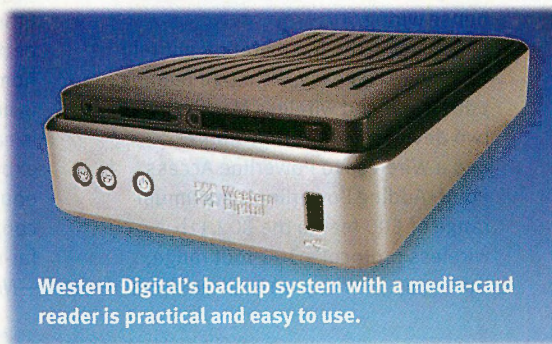
an edited movie by tossing out the media you don't need anymore. Let's say you've captured 10GB of video for a project, but your edit really only uses 3GB. If you want to keep that project around to edit another day, you need to keep the whole 10GB of video on your hard drive. The workaround is to delete all of the video and use Express' Capture Project feature to recapture it later from your original DV tapes. But who keeps all their old DV tapes?

Realistically, Final Cut Express's limitations are beyond the concerns of most of us; it packs enough powerful, professional features for any advanced hobbyist (and many pros as well). If you're getting frustrated with iMovie's limits, buy Express. And if you've already got Express, the \$99 upgrade to version 2 is worth it for the real-time previews alone. Final Cut Express is still the best value in video editors we've seen—on the Mac and anywhere else.—*Helmut Kobler*

## Media Center

### CONVENIENT BACKUP DRIVE AND MEDIA-CARD READER

If you're into digital music, photos, or video, a backup drive is a must and a media-card reader is a definite bonus. Western Digital's Media Center gives you both in a solid—albeit slightly quirky—setup that uses Dantz's Retrospect Express 5.1 to create a Finder-readable backup on its 7,200-rpm, 250GB drive, which connects to your Mac over FireWire 400 or USB 1.1 or 2.0. On the front of the Media Center is a second USB 1.1/2.0 port and two buttons: a Backup On Demand button, which does just that, and an Automatic Backup button that, once you create a scheduled script using the Setup Wizard, simply glows blue—you never touch it unless you want to modify your schedule. We're annoyed that we couldn't create bootable backups using the Setup Wizard. To get around that limitation, we



Western Digital's backup system with a media-card reader is practical and easy to use.

partitioned the Media Center and used Retrospect's Duplicate feature to create a bootable backup—one that would work independent of the buttons—on one of the partitions. We used the Automatic Backup button to back up our work files and email on the other partition.

A two-slot Memory Stick, Memory Stick Pro, MMC, SD, SmartMedia, MicroDrive, and CompactFlash (Types I

and II) media-card reader is tacked on top of the drive—but you need a separate USB cable to connect the reader to your Mac. Inserting and removing media was awkward in some cases—you have to put in some cards, such as SD, underbelly up, and our not-so-fat fingers needed tweezers to pull out the Memory Stick. Another quirk is that you must use the power button to dismount and power down the drive. If you instinctively drag the drive's desktop icon to the Trash, you can't use the power button to power down—it'll just blink. Western Digital says you *should* be able to use the button to power down after dragging a volume to the Trash, but our test unit didn't work that way. Despite these minor annoyances, we like the Media Center—especially its built-in media-card reader.—*Narasu Rebbapragada*



**COMPANY:** Western Digital  
**CONTACT:** 800-275-4932 or  
949-672-7000, [www.westerndigital.com](http://www.westerndigital.com)  
**PRICE:** \$399.99

**REQUIREMENTS:** USB-equipped  
Mac, Mac OS 9.2.2 or 10.1.3 or later  
(FireWire port recommended)

**GOOD NEWS:** Convenient. Easy to use. Includes  
eight-way media-card reader.  
**BAD NEWS:** Can't automatically create bootable  
backups. Some interface quirks.

**MacAddict RATED**  
  
**GREAT**





PHOTOGRAPH BY MARK MADEO

## Powerline System

EASY-TO-USE AC-WIRING NETWORKING GEAR

Wireless networking isn't the only way to connect your Macs without stringing Cat 5 Ethernet cable everywhere. Corinex's Powerline networking gear pipes your network packets through the AC (alternating current) electrical wiring of your home or small business—you can add a network port to any electrical outlet in the building. Powerline's 14-Mbps top speed is slightly faster than AirPort's 11 Mbps but slower than AirPort Extreme or 100Base-T Ethernet (54 Mbps and 100 Mbps, respectively). In Powerline's favor, its theoretical top range is 600 feet—double AirPort's.

We took home an assortment of Corinex's Powerline gear (see "The Players," below, for the list) and found that the technology is extremely versatile. We easily integrated Powerline

into our existing AirPort-and-Ethernet network, replacing the Ethernet side of the net with a pair of Powerline Wallmounts plugged into our house wiring, one connected to the AirPort Base Station's LAN port, and one to the Power Mac in the next room. We used standard Ethernet cable to make both of these connections, but those were the only Ethernet wires in the whole setup—the rest of the network ran over house wiring.

Replacing the Base Station entirely was almost as easy, although feeding both wired and wireless Macs required two devices: a Powerline Router and a Wireless to Powerline Access Point. Adding Powerline's maximum range of 600 feet to the 802.11b wireless protocol's 300-foot range, this setup provides up to three times

Corinex's Powerline is a viable alternative—or complement—to your home or small-business AirPort or Ethernet network.

AirPort's range.

But there's a reality check: Powerline's speed and range depend heavily on the condition of the wiring. We recommend dropping \$69.50 on Corinex's Diagnostics Kit, which determines the signal strength between various outlets before investing too heavily in Powerline. We used the Diagnostics Kit in a few different houses and discovered just how severely house wiring can affect Powerline. In one house, the signal didn't even last for 100 feet; in another house, the signal remained solid at about 300 feet—sadly, no one we know has enough mazuma to live in a home big enough for us to test Powerline's full 600-foot range.

Powerline's maximum speed isn't blazing-fast, but it's plenty fast for most home-networking purposes—namely, sharing broadband Internet connections, which generally top out at 1.5 Mbps. And iTunes file-sharing was smooth as butter. If you simply want to enhance your home AirPort network, we'd suggest adding a couple of Powerline Ethernet Wallmounts into the mix for better versatility. If you're building a new home network from scratch, Powerline is an easy way to get it done. This gear is easy to set up, only a little more expensive than other types of network equipment, and—assuming you have cooperative electric wiring—fast and far-reaching enough for home use.

—Niko Coucouvanis

## THE PLAYERS

### ETHERNET WALLMOUNT

(\$69.50) Connect any Ethernet-equipped device, such as a Mac or an AirPort Base Station, to a Powerline network—or create an ad-hoc network over your electrical wiring by using one

wallmount on the Mac and one on the Base Station.

### POWERLINE ROUTER

(\$119.50) Works with a Powerline network or on its own as a plain-vanilla router and switch with four Ethernet

ports: one for a cable- or DSL-modem input, and three for connecting Macs through 10/100Base-T Ethernet.

### WIRELESS TO POWERLINE ACCESS POINT

(\$129.50) This wireless access point is almost as useful as an AirPort Base Station but lacks an Ethernet-in port—you have

to get the network juice out of an existing Powerline network.

### DIAGNOSTICS KIT (\$69.50)

Two modules, one transmitter and one receiver, test the connection between AC outlets. LEDs on the receiver indicate the signal strength between the two units.



**COMPANY:** Corinex  
**CONTACT:** 604-692-0520,  
www.corinex.com  
**PRICE:** \$69.50 and up

**REQUIREMENTS:** Ethernet-equipped hardware, Mac OS X

**GOOD NEWS:** Easy to set up. Fast enough for Internet sharing. Better range than AirPort. Plays well with AirPort and wired networks.

**BAD NEWS:** Slower than Ethernet. Bad house wiring kills it.

**MacAddict RATED**  
●●●●●  
**SOLID**



Nothing can stop him.  
Except...

## Intego Desktop Internet Security and Privacy Software for Mac OS X

The Internet lets you reach out to the world, expand your knowledge and broaden your horizons. But hackers and vandals stalk your Mac, offensive content abounds on web sites, and viruses threaten your files.

Intego provides the widest range of software to protect you and your Mac from the dangers of the Internet. Intego's multilingual software repeatedly receives awards from Mac magazines, and protects more than one million users in over 60 countries.

As the dangers of the Internet grow, Intego is hard at work, developing new software to protect you and your Mac from the latest threats to your security and privacy. Get the best protection for your Mac and for your world.



Panther and Jaguar compatible

See us at:

[www.intego.com](http://www.intego.com)



we protect your world.

Intego • 500 North Capital of Texas Hwy, Suite 8-150 - Austin, TX 78746 • Tel (512) 637-0700 • [sales@intego.com](mailto:sales@intego.com)  
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### Intego NetBarrier X3

The first Internet security solution for Mac, including firewall, antivandal, filter, privacy and monitoring features.



### Intego VirusBarrier X

The ultimate antivirus solution for your Macintosh. Eliminates all known viruses.



### Intego ContentBarrier X

Protects your family from the dangers of the Internet so your children can surf in peace.



### Intego Personal Backup X3

Provides a full range of backup, restoration, synchronization, and cloning functions.



### Intego Internet Security Barrier X

The must-have Internet security and privacy suite for total protection for your Mac.



### Intego ChatBarrier X3

Encrypts iChat instant messaging sessions with unbreakable, military-grade encryption.

Single-user, multi-user, and site-license versions available. Please contact our sales office.

Products available from:

Apple Store

MacMall

NAVARRÉ CORPORATION

fray's ELECTRONICS

J&R MUSIC WORLD



# i80 Color Bubble Jet Printer

**SURPRISINGLY CAPABLE PORTABLE PHOTO PRINTER**

Canon's i80 looks similar to its capable i70 predecessor but sports some drastic changes under the hood—most notably, its smaller printhead nozzles produce ink droplets as small as 2 picoliters while the i70 was limited to 4-picoliter droplets. The result is a portable printer whose output rivals that of any 4-color desktop printer.

The i80 has an impressive list of

stingy capacity (10 pieces of Canon's glossy or matte paper) doesn't thrill you, wait until you see its output tray—oops, there isn't one. Prints come to rest in a pile in front of the printer.

The i80's portable convenience also limits its ink capacity—the tiny tanks could only print 15 borderless 8.5 by

the i80 spit out 24 more borderless 4 by 6 photos over a second 2-hour period before the battery died.

The i80's prints exhibited sharp detail with no visible droplets and smooth gradients with almost zero banding, even on our full-page black-to-white gradient. Text showed slight jaggedness under a magnifying glass but was quite readable. We did, however, notice a common inkjet malady: There was a slight color difference when printing the same photo on glossy paper versus matte paper.

The i80 is whisper-quiet when printing color photos and just a touch louder when printing text. It's not as fast as the spec sheet's claimed 14 ppm for black and white and 10 ppm for color, but we printed 20 pages of text in a respectable 2 minutes and 30 seconds. Top-quality, borderless 4 by 6 photos took about 90 seconds; 8.5 by 11 photos at the same settings took 3 minutes and 20 seconds—not bad at all. And if you don't feel like lugging your PowerBook along for in-the-field printing, you can plug in a digital camera or DV camera that supports PictBridge or BubbleJet Direct technology and print sans Mac.

This printer's portability and excellent output override our gripes about the small and multicolor ink tanks. The only real issue is price: The optional battery pack ups the ante by \$100 (add another \$89.99 for the cigarette-lighter power adapter), but if you're OK with that, the i80 is a winner.—*Niko Coucouvanis*

The i80 looks like last year's i70, but its prints are in a whole 'nother league.



features, especially for such a little guy, including borderless printing up to 8.5 by 11 inches, print resolution up to 4,800 by 1,200 dpi in color and 600 by 600 in black and white, a dainty 12.4-by-6.9-by-2-inch footprint, and an easily luggable 4-pound weight (although the optional \$99.99 battery and battery housing add another half a pound or so). The battery-equipped i80 fit comfortably alongside a PowerBook in our man-purse and in other full-sized notebook bags.

The svelte i80 does trade some features for portability: There's no pass-through slot for printing thick envelopes and other media you don't want to bend around the roller, and ink comes in only two cartridges: one black (\$11.95) and one that combines cyan, magenta, and yellow (\$21.95). Also, if the input tray's

11 photos, a dozen borderless 4 by 6 photos, and 40 pages of text before running out of ink. The good news is that after that 2-hour printing session, two of the battery's three LED status lights remained lit. When we swapped in fresh ink tanks and resumed printing,

## MAKE IT MOBILE

The i80 is undeniably small and cute—but for true portability, you need to accessorize with some optional—and none too cheap—accoutrements.

The Cradle Kit (part number CK-51; \$139.99, [www.canonusa.com](http://www.canonusa.com)) adds a Lilon battery, battery housing, and slick desktop dock that doubles as a battery charger. If you want to go lowball and skip the dock, make sure to get the Portable Kit (LK-51; \$99.99), which includes the all-important battery housing. If you just buy a replacement battery (LB-51; \$89.99), you don't get the housing and hence can't connect the battery to the printer.



**COMPANY:** Canon  
**CONTACT:** 800-652-2666  
or 516-328-5000, [www.canon.com](http://www.canon.com)  
**PRICE:** \$249 (\$205 street)

**REQUIREMENTS:** USB-equipped Mac; Mac OS 8.6 to 9.x, 10.2, or PictBridge-compatible camera for computerless printing

**GOOD NEWS:** Great photo quality. Good battery life.  
**BAD NEWS:** Expensive. Battery and car-power adapter not included.

**MacAddict RATED**  
●●●●●  
**GREAT**



# Star Trek: Elite Force II

## FAST-PACED STAR TREK ACTION GAME

Following up the best *Star Trek* game ever produced—*Star Trek: Voyager Elite Force* (aka the *only decent Star Trek* game ever produced; see *Reviews*, Mar/01, p52)—*Elite Force II* reunites you with your Elite Hazard Team, only this time you're working for Captain Jean-Luc Picard. In this intense and worthy sequel, you get to blast more Borgs, kill more Klingons, and rough up more Romulans, plus suss out three new enemies.

You play Lieutenant Alexander Munroe (leader of the original Hazard Team). As the game begins, you're fighting the ever-threatening Borg when you're suddenly whisked off to Starfleet Academy to train new recruits in combat techniques. But teaching is for wussies: As Munroe, you're an action-hungry guy, so Picard recruits you for the new Hazard Team aboard the USS *Enterprise*.

So far, so good—but a creepy buglike race has attacked a Federation starship and infested a nearby space colony, and Picard receives orders to track down the nasty bugs and eliminate them. The result is a heart-pumping shooter that blazes through alien worlds and seldom slows down. There's plenty of story line here, with all kinds of plot twists. It's almost like watching an episode of the old TV series—a good one.

The alien insects, called Exomorphs, descend in swarms, throwing themselves at you for in-close

fighting—not unlike the vermin Flood in *Halo: Combat Evolved*. But the Exomorphs aren't your only problem. Inexplicably related to the bug attacks are two additional alien factions—a thuggish industrial race called the Attrexians, and their servants, a once powerful, now humble race

known as the Idryll.

To find and destroy the invaders, you lead the Hazard Team through widely scattered worlds, space stations, and alien ships, all thoroughly detailed and artfully rendered. You'll use more than a dozen weapons, including compression rifles, grenade launchers, the standard phaser, and our favorite, the personal photon torpedo.

Between bouts of action, you converse with your shipmates (or eavesdrop on their conversations) and explore the *Enterprise*. Use your advanced tricorder to solve puzzles and find secret passages, many of which lead to miniature gold spaceships. Find enough miniatures and you unlock new maps.

As fans will recognize, the game's voice-overs were created by actors from the original *Voyager* TV show—a great touch in the single-player game, where our only real complaint is the sometimes dumb AI (artificial intelligence) that controls our teammates and enemies. Under its guidance, friends tended to wander aimlessly into our line of fire, while foes generally stand still, blindly blasting their weapons until you kill them. Multiplayer mode extends the game's playable life with the standard deathmatch and capture-the-flag varieties, as well as several variants, such as a last-man-standing Elimination game and an Action Hero game, in which you—equipped with full armaments and regenerative health—fight alone against everyone else. You can play against computer-controlled bots on your machine (who are as dense as their counterparts in the single-player campaign), or against humans on a LAN or on the Internet via GameRanger ([www.gameranger.com](http://www.gameranger.com)).

All told, *Elite Force II* is a good alien-blasters, with enough visceral excitement and TV nostalgia to please first-person shooter fans and *Star Trek* fans alike.

—John Lee

Resistance is futile.



One of your first missions is to rescue this poor sap before he gets assimilated.

**COMPANY:** Aspyr  
**CONTACT:** 512-708-8100,  
[www.aspyr.com](http://www.aspyr.com)  
**PRICE:** \$39.99

**REQUIREMENTS:** 733MHz Power Mac G3, Mac OS 10.1.5, 256MB of RAM

**GOOD NEWS:** High-octane action. Challenging puzzles.

**BAD NEWS:** Single-player AI is occasionally low on intelligence.

MacAddict RATED  
GREAT





# Jedi Knight II: Jedi Academy

FUN ACTION GAME

Two dumb Stormtroopers are no match young Jaden, especially after he's earned his official Darth Maul Dual-Edged Pro II Deluxe Gold Edition lightsaber.

Jedi Knight II: Jedi Academy casts you as Jaden, a young Jedi Padawan (that's *student*, in case you don't speak Jedi) who shows up at Luke Skywalker's world-famous Jedi Academy and begins what must be the Galaxy's most lethal on-the-job training program short of a *MacAddict* internship. The game's elaborate environments, characters, lightsabers, and Force powers make it fun for anyone—but true Star Wars fans will adore Jedi Academy.

Like its prequel, Jedi Knight II: Jedi Outcast (see *Reviews*, Feb/03, p37), Academy is like an adventure travel expedition for Star Wars junkies: You visit exotic hotspots like the deserts of Tatooine and the ice fields on Hoth; ride Tauntauns, speeder bikes, and hot-wired MiniWalkers; and fight alongside Star Wars celebrities like Chewbacca, Wedge, and others.

Unlike Outcast, Academy offers you plenty of personal choices, starting with Jaden's identity—you can choose Jaden's sex, species (human or one of four others), fashion sense (we liked the dark blue/black pantsuit), and even lightsaber color. You can choose the order in which you move through missions, even skip some altogether if you wish, but this nonlinear progression

prevented us from getting completely immersed in the game. The real fun is in fine-tuning your Force powers during the game—for example, you might cultivate the suggestive powers of a Mind Trick instead of a practicing a quicker Heal or a tighter Choke.

As for gameplay, Academy is generally engaging but never quite reached a boil for us. For one thing, its nonlinear

as posts: Stormtroopers, mercenaries, sand creatures, and others tend to stand and fire from a set position, waiting patiently for you to dole out some lightsaber justice. You rarely need a gun. Of course, you can spice things up by slaughtering these sheep with your Force powers. Choking them, levitating them into the ceiling, and electrocuting them in bulk is always good for a laugh, but beating smarter enemies would be more satisfying.

Luckily, later levels pick up the pace, and things get all-out thrilling when you find yourself in a lightsaber duel against a worthy opponent. The different single- and dual-bladed sabers call for unique fighting styles, and you can control the nuances of your attacks—broad sweeps, quick stabs, kicks, and so on. When you combine saber tactics with leaps, cartwheels, and strategic use of Force powers (a good Push or Choke, perhaps), it's a blast. In fact, we wouldn't mind if the game was one big Force-fuelled lightsaber duel.

Overall, we're generally satisfied with Jedi Knight II: Jedi Academy. It pulls you into a beautiful 3D world populated by dozens of characters and endless target opportunities. Plus, the replay value is high, thanks to the wide range of Force skills Jaden can learn and forms he or she can take.—*Helmut Kobler*



You can cast Jaden as one of five different species, and then pick out your wardrobe.

mission progression makes it hard to follow the storyline, which in itself isn't inspired (an evil cult is trying to harness the Force for their own evil ends, blah, blah, blah...). Plus, there's some hokey dialog thrown in—even cheesier than the usual *Star Wars* banter.

Another gripe is that the game starts off slowly. The first several levels drag on a bit, and many enemies are as dumb



**COMPANY:** Aspyr Media  
**CONTACT:** 888-212-7797  
www.aspyr.com  
**PRICE:** \$49.99

**REQUIREMENTS:** 500MHz PowerPC or faster, Mac OS 10.2.6 or later, 256MB RAM, 1.3GB disk space, ATI Radeon 7500 or nVidia GeForce 2 video card or better, 32MB VRAM

**GOOD NEWS:** Beautiful 3D worlds. High replay value. Lightsabers and Force powers rock.  
**BAD NEWS:** Early levels feel slow and lack excitement. Predictable storyline. Hokey dialog.

**MacAddict RATED**  
●●●●●  
**SOLID**



# EyeHome

## CLUMSY DIGITAL MEDIA PLAYER

If you want to use your TV to watch iPhoto slide shows, iMovie movies, and content recorded by El Gato's EyeTV—as well as listen to music—the EyeHome will bridge your Mac and home entertainment system. But after our journey into this world of digital convergence, we found ourselves wondering: Is it really *all that*?

The EyeHome works as advertised, but it's a hassle to use. Attach the EyeHome to your TV via composite, S-Video, or component-video cables.



And once connected, five menu choices will appear on your TV screen: EyeTV, Movies, Music, Pictures, and Services. EyeTV shows you your EyeTV-recorded content. Movies displays content in your home-movies folder and will play any MPEG-1, -2, -4, or DivX content. Pictures lets you view your iPhoto albums (even Smart Albums)—you can view pictures individually or as a slide show, and it even keeps the music you selected in iPhoto (it won't, however, play music downloaded from the iTunes Music Store).

Music gives you access to all of your iTunes music, grouped by album, artist, genre, and Playlists (in this instance, EyeHome *can* play your iTunes Music Store songs). And finally, Services gives you access to iTunes radio stations and Safari bookmarks.

Our problem with the EyeHome is that neither its interface

**Sometimes even good ideas fall short.**

Then attach the EyeHome to your home network (or to your Mac via a crossover Ethernet cable). You can either plug your EyeHome into your wired network via a router, hub, or switch, or you can use it on your wireless network. An 802.11g (aka AirPort Extreme) network is required for video streaming, and you have to plug the EyeHome into a wireless 802.11g Ethernet adapter (we used MacWireless's 11g Ethernet Adapter; \$169, [www.macwireless.com](http://www.macwireless.com)). The EyeHome ships with a remote and an Ethernet cable but no video cables.

Once you set up your EyeHome and adjust a few settings on your Mac as detailed in the one-sheet setup guide, the EyeHome detects your network.

nor its integration with the remote is particularly intuitive. For example, when a green light appears on the device, it's off. When the light is off, that means it's, uh, on. When playing a slide show, navigating to the album you want to view and pressing the play button on the remote yields an "Invalid Format" message. Instead, you must open the album, navigate to the top of the screen, and click the onscreen play button. Also, while the circle-patterned visuals that accompany your music aren't ugly, they're your only choice of visuals—and you can't turn them off.

The EyeHome works, but it's annoying to use. Home entertainment used to be so much easier.—Cathy Lu

**COMPANY:** El Gato  
**CONTACT:** [www.elgato.com](http://www.elgato.com)  
**PRICE:** \$249

**REQUIREMENTS:** G4; Mac OS 10.2.8 or later; network connection; connection between Mac and TV via composite, S-Video, or component-video cable

**GOOD NEWS:** Provides access to media libraries via TV.  
**BAD NEWS:** Awkward interface

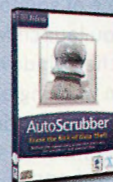
MacAddict RATED  
○○○○○  
50-50



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# Max/MSP 4.3

## COMPLEX AUDIO-PROGRAMMING ENVIRONMENT

If you want something done right, you often have to do it yourself. Max/MSP is the ultimate do-it-yourself audio software, a deep and fun universe of components you can use to play Dr. Frankensound, cooking up fantastically intricate special effects for both MIDI and sampled-audio data. This amazing

for doing math, MIDI controllers, delays, pitch benders, filters, mechanisms for capturing and processing sampled audio information, and much more. Need a digital delay/echo to apply filter modulations to reverberations as they decay over time? Or how about a stutter effect to scratch incoming audio

Units and Core MIDI) means that interoperability with other Mac OS X audio apps is a snap. You can pipe MSP into just about any production pipeline, and add custom processing to MIDI sequencers and other audio-editing apps. Tie your custom Max/MSP patches directly into stand-alone

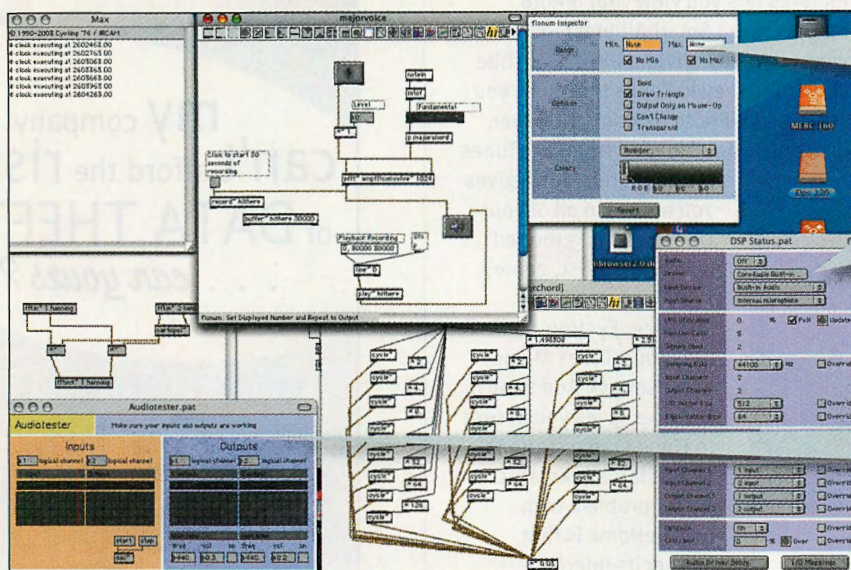
sequencers via ReWire and VST interfaces, or even create stand-alone audio processing effects programs for real-time audio wrangling. There is also a separate package called Jitter, which has more than 135 objects for tying video, animated-graphics, and visual-effects processing into Max/MSP. MTV: Stand back.

One of the truly admirable things about this

**The Object Inspector provides detailed specifics on selected objects.**

**The DSP Status window lets you keep an eye on processor usage.**

**Audiotester lets you visually mind your ins and outs.**



**The Max/MSP programming environment isn't quite so scary once learn your way around.**

programming tool is a wonderful educational aid for learning the theory and practice of sound creation.

When you launch Max/MSP, a blank Patcher window appears. This is the main working environment, the primary window for designing your virtual machines. To start, you can open existing Max/MSP files, called *patches*—a great way to wrap your brain around the organizational approach of the software. Alternatively—if you're brave enough—just start pulling out *objects* (aka modules) and wiring them together. There are more than 400 objects from which to choose, including interface elements (sliders, graphical displays, buttons, and knobs), numerical processors

based on real-time input from a Wacom graphics tablet? Maybe you want a pitch bender tied to the tempo of a drum track playing in a sequencer so that the pitch of a bass line lowers automatically as the drum tempo slows down?

*No problema!*

Max is the portion of the software designed to handle MIDI and symbolic information with over 250 objects. The MSP engine is comprised of over 150 objects for dealing with sampling, plus the associated signal processing for effects and audio file management, such as hard disk recording. Astoundingly, MSP provides processing for up to 512 channels of audio information—that's more than any hardware interface we know of.

Full Core Audio support (both Audio

software is its documentation and help system. You can invoke a fully contextual, detailed screen of information for any selected object. Plus, 1,500 PDF pages of richly detailed documentation really get you into the guts of this powerhouse. There is an entire universe of knowledge for you to tap into on the Web, from the excellent Community section of the Cycling '74 Web site to hundreds of pages of techniques and patches you can download and use for your own creations.

If instant gratification is your bag, you'll likely be overwhelmed at the outset. If you are looking for an endless supply of aural dominance and diversion, however, Max/MSP will become your favorite sleep-deprivation device.—*David Biedny*

X  
9

**COMPANY:** Cycling '74  
**CONTACT:** 415-974-1818,  
[www.cycling74.com](http://www.cycling74.com)  
**PRICE:** \$495

**REQUIREMENTS:** Mac OS 10.2 or later, 256MB RAM (includes Max/MSP 4.1 for Mac OS 8.6 to 9.x)

**GOOD NEWS:** Flexible. Powerful. Handles MIDI and sampled sounds. True real-time audio processing. Excellent documentation and tutorials.

**BAD NEWS:** Tough to learn.

MacAddict RATED  
  
 AWESOME



# IntelliScanner Collector

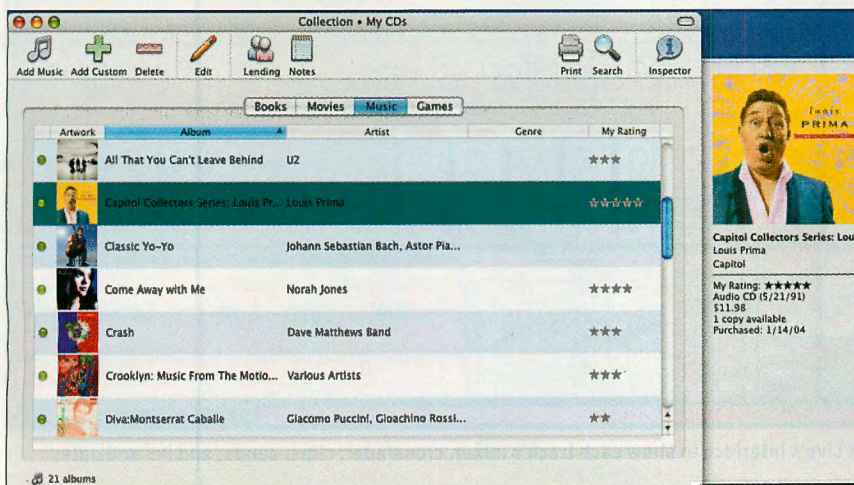
## BAR-CODE SCANNER AND CATALOGING SOFTWARE

If your friends and family use you as their local library or personal Netflix service, then you need to keep tabs on your media. Thanks to the magic of bar-code scanners, it's a cinch.

IntelliScanner Collector comes with a handheld scanner plus software to catalog your movies, music, books, and games. Plug the scanner into a USB port, start up the Collection software,

and so on. The software also collects cover artwork. Be forewarned: At times the software can't find a product. Out of more than 20 CDs scanned, it couldn't find info on four, some of which are pretty well known. (The company says it's working on this weak link.)

As with iTunes, you can give each title a rating. You can also record the location of the title, input comments, and add a



The Collection software shows you a list of all your albums, and you can choose the sort criteria.

click the Add Books (or Movies or Music or Games) button, and start scanning. If you've ever had cashier envy, this is a great outlet—without the annoying customers, crappy hours, and nonexistent benefits.

**The Collection software is easy to use but has its share of inefficiencies (and crashes).**

Once you scan your stuff, the software will run out to Amazon.com and other online sources to gather information such as author and publisher names (books), album and track names (music),

note about who borrowed your stuff and when it's due back.

The Collection software is easy to use, but like any virgin software, it has its share of inefficiencies (and crashes). For instance, you have to go into the editing screen of each title to rate it (rather than being able to rate it in list view). And whenever you want to scan a product, you need to tell the software what category to put it in first—it seems like the software should be smart enough to know what genre you're scanning. However, with a little work, we have confidence that the software will be great.—Cathy Lu

**COMPANY:** Intelli Innovations  
**CONTACT:** 919-468-0340, [www.intellisw.com](http://www.intellisw.com)  
**PRICE:** \$199

**REQUIREMENTS:** Mac OS 10.2 or later, USB port



**GOOD NEWS:** Quickest, funnest way to catalog your home library—if you're into that.

**BAD NEWS:** Software has limitations—sometimes can't identify a product, sometimes freezes.

**MacAddict RATED**  
●●●●●  
**SOLID**

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**Mac**

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# Ableton Live 3.0.2

POTENT AUDIO SEQUENCER

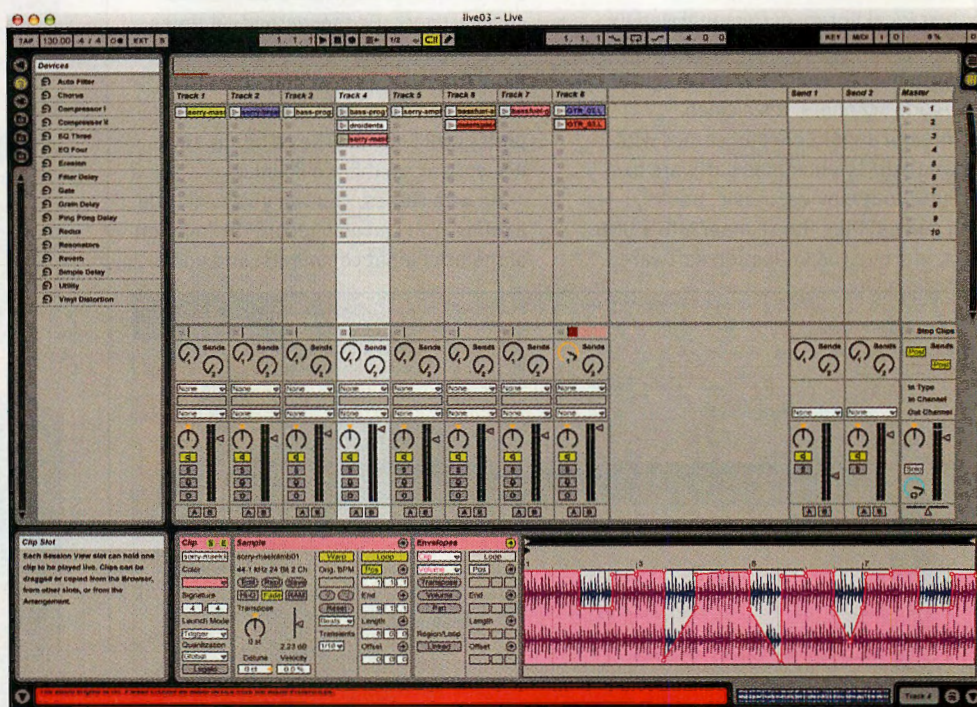


Getting audio loops to cooperate in tempo and key used to require an arcane ritual of cajoling samplers and expensive pitch/time apps. With Ableton's Live, however, you can drop in loops and samples with ease, massage them into perfect sync and key, and throw in some killer time-based effects as well. The real kicker is that you can do it all *live*, in real time.

The most notable new feature in version 3 is the ability to use Live's envelope-based automation on the individual clip level—previously you could only apply automated effects to an entire track. Better yet, you can now apply effects to selected parts of the clip, not just the entire clip. For example, you can create a volume envelope for a clip and have that particular clip's volume rise and fall independent of the master track.

Ableton also tosses in some new effects, such as chorus and reverb, to beef up Live's EQ (equalization) and dynamics. The new Compressor II includes *sidechain* EQ, which lets you select only the frequency you want to compress instead of compressing the entire tonal spectrum of the track. This lets you be more precise by compressing, for example, the low end of a track consisting of multiple instruments instead of the whole track. You can also use Compressor II as a primitive mastering compressor—so you can work on select portions of a mix via the master channel.

Another new effect is EQ Three, a three-band "DJ style" EQ that puts a massive 48 decibels of filtering at your



Here we've set Live's interface to show each track's mixer, crossfader, clips, sends, and ins and outs.

disposal, providing extreme frequency boosts and cuts as easy to fire up as pushing the EQ slider on a mixer. Live 3's method of frequency tweaking is child's play compared to the old way of manually twiddling complex EQ plug-ins. Speaking of DJ-type features, Live now offers DJ-type crossfading between tracks—sweet!

We firmly believe you can never have too many audio filters, so we love the new Resonators effect. Unlike the more familiar low- or high-pass filters, Live's Resonators consists of five resonant filters that boost or cut particular frequency subtleties of a given sound. Resonators can produce almost synthlike sounds; because you can use it to tweak selected harmonics, you can add an element of melody to unpitched sounds such as drums. The last new effect is Utility, which gives you control over stereo width, phase, and extra gain

controls for added volume wrangling.

Also enhanced is Live's MIDI control, which has new MIDI keymapping functions. Now you can play your clips from a MIDI controller keyboard, and it will transpose the clip chromatically. It's easy enough to set up—just go into MIDI assignment mode, select the root key plus the upper and lower transpose keys, and play your sample all the way up the keyboard.

Our complaints are few: Live occasionally crashes on certain VST plug-ins, and although we love its ReWire support for integrating Live sessions with high-end audio processors such as Pro Tools, ReWireing a complex session can result in downgraded performance.

If you have any interest in adding a Mac to your studio-production or live-performance audio arsenal, you owe it to yourself to try Live 3.—*Kent Carmical*



**COMPANY:** Ableton  
**CONTACT:** [www.ableton.com](http://www.ableton.com)  
**PRICE:** \$399, \$99 (upgrade from version 1.x), \$69 (upgrade from version 2.x)

**SYSTEM REQUIREMENTS:**  
G3, Mac OS 9.2 or later,  
256MB RAM

**GOOD NEWS:** Still the best app for loops and live remixing. Clip-level automation. Compressor II.  
**BAD NEWS:** Occasional crashes when using ReWire and some VST plug-ins.

**MacAddict RATED**  
GREAT



# Word Menu 2.2

## UNIQUE-BUT-INCOMPLETE REFERENCE TOOL

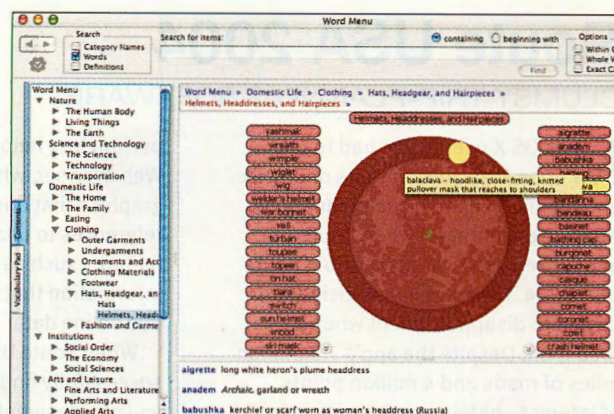
If you love words and reference tools, you'll enjoy flipping through Word Menu's nicely organized, comprehensive lists of words. We did. However, the app's shallow definitions and lack of pronunciation keys left us wondering how often we would actually it.

Word Menu organizes over 76,000 words into seven main categories, such as Science & Technology, Domestic Life, and The Human Condition. These categories contain subcategories, which contain more subcategories, and so on—some categorization is surprising, though logical. One of the entries for *pirate*, for example, is located under Science

And Technology > Transportation > Ships And Boats > Nautical Occupations.

Word Menu's interface provides a choice of views—either as split-screen text or as a graphical representation in the Fractal Browser. Search options are adequate and neatly stored at the top of the window, and you can store words you want to refer to later in the Vocabulary Pad. What's missing? Pronunciation keys and notes on usage—key elements to any truly useful word reference tool.

Word Menu is great tool for any generalist who needs to relate to specialists—students, journalists, or people who want to cheat on crossword



And all this time, we thought balaclava was a Turkish desert pastry...

puzzles. It also provides a fast way for people to expand their vocabulary in a specific subject (say, if you're new to the astronomy club and don't want to talk out Uranus). However, it doesn't really work as a comprehensive thesaurus or a dictionary.—Jennifer Morgan



**COMPANY:** Write Brothers  
**CONTACT:** 800-847-8679,  
www.wordmenu.com  
**PRICE:** \$34.95

**REQUIREMENTS:** Power Mac G3,  
Mac OS 10.1 or later, 128MB RAM, 20MB  
disk space

**GOOD NEWS:** Topical lexicons make you sound savvy.  
Helps cure writer's block.  
**BAD NEWS:** No pronunciation keys or usage notes.

**MacAddict RATED**  
SOLID

# RoadStor Portable CD Burner

## DO-IT-ALL CD BURNER AND MEDIA-CARD READER

Slick! MicroSolutions' RoadStor reads all major media cards and burns their contents to CD—no computer required. It supports Compact Flash I and II, Microdrive, SecureDigital, SmartMedia, MultiMediaCard, Memory Stick and burns multisession CDs with ease—you can use the same 700MB capacity CD until it's full. For fieldwork, the unit includes a rechargeable Lilon battery that will power it for two hours.

We burned 113MB of picture files from a SanDisk CompactFlash card in just under 8 minutes. Then we added some pictures from an Olympus xD card (using a \$40 CompactFlash adapter, not included) for a second session. Each session appeared as a separate, numbered folder on the CD. One omission is that there's no guidance on



This device makes sharing and archiving photos a no-brainer—with or without a Mac.

the RoadStor as to which way is up when inserting media cards—and that info's not in the manual either. (All cards slide in label-up, except SmartMedia, which slides in face-down.)

But wait, there's more: Connect either

a composite or S-Video cable (both included) to a TV and press the power button on RoadStor's included remote to view your images directly from memory cards or burned CDs. You can also watch DVDs on TV or on your Mac via the supplied USB cable—but playback over USB 1.1 is far from smooth, so use USB 2.0.

If you shoot lots of digital pictures and need an easy way to archive and share them, RoadStor is a supremely handy device—especially if you're not always near your Mac. It's compact, lightweight, and comes in a compartmentalized, weather-resistant case that holds accessories securely.—Arthur Bleich

**COMPANY:** MicroSolutions  
**CONTACT:** 800-890-7227,  
www.micro-solutions.com  
**PRICE:** \$269

**REQUIREMENTS:** Mac OS 10.1.3 or later (for  
computer-connected use)

**GOOD NEWS:** Simple to operate. Versatile. Well-built case and  
cables included.  
**BAD NEWS:** Initially tricky memory-card insertion. Requires  
USB 2.0 to play DVDs on your Mac.

**MacAddict RATED**  
GREAT



# Route USA 2004

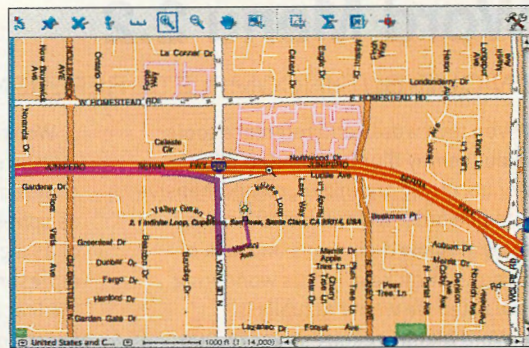
## CLUMSY TRIP-PLANNING SOFTWARE

Mac OS X users have had to rely upon MapQuest and its online ilk for mapmaking and route planning, so we were encouraged when Route 66 announced its OS X-compatible Route USA 2004. However, our anticipation turned to disappointment when we fired it up. Despite the app's 7.3 million miles of roads and 4 million points of interest—hotels, restaurants, gas stations, and the like—in the United States and Canada, a lack of decent documentation makes it difficult to learn the app's awkward user interface, and trial-and-error experimentation is hindered by pathetic performance.

Route USA lacks a print or PDF user guide, so you must wade through

perfunctory help text in a Web browser, which includes graphics that don't load and references to unavailable features such as Traffic Information that draw from live online data.

When Route USA successfully finds a location, you can designate it as a departure, destination, or intermediate waypoint, and Route USA can then suggest possible routes. While usually accurate, the resulting directions are ridiculously detailed—for example, one set read, "Leave in north-western direction. After 520 ft turn right towards Rivera St."



Route USA 2004's pretty maps are undercut by the app's inscrutable interface and performance problems.

If you are willing to navigate around its user interface potholes and performance-sapping speed bumps, Route USA 2004 can eventually get you to your destination—but Mac users deserve a smoother ride.

—Owen W. Linzmayer



**COMPANY:** Route 66  
**CONTACT:** +31 (0)20 312 30 66 9  
(Netherlands), [www.66.com](http://www.66.com)  
**PRICE:** \$39.99

**REQUIREMENTS:** 400MHz G3 or faster (600MHz recommended), Mac OS 10.1 or later, 128MB RAM (256MB recommended), 2.4GB disk space

**GOOD NEWS:** Great big gobs of information. Attractive maps. Accurate directions. Inexpensive.  
**BAD NEWS:** Poorly documented. Annoying user interface. Slow. Buggy.

MacAddict RATED



# Eye-Q Go Wireless

## LAME BLUETOOTH CAMERA

We dig both Bluetooth and digital cameras, but unlike rum and Coke, cocktailizing the two does not create a wholesome entity. The Bluetooth-enabled, 2-megapixel Eye-Q Go Wireless digital camera is a veritable poster child for mismatched technologies.

Sporting that cheap, about-to-fall-apart-in-your-hand-at-any-second feel, the Go Wireless includes many standard digicam features: exposure-value and scene-select settings, automatic white balance, multiple resolutions, an AVI-movie mode, a 1.6-inch color LCD, onboard flash, 4x digital zoom (no optical zoom), an SD/MMC card slot, a self-timer, and a nonrechargeable lithium battery. Unfortunately, none of these features mask the Go Wireless's basic lack of picture-capturing quality.

After a long afternoon spent snapping



The Bluetooth-enabled digital camera: Will its time ever come?

shots, we wound up with nothing but blurry, poorly exposed images. Adding insult to this injury was the painfully slow 2-to-3-Kbps Bluetooth transfer speed: A full-size (1,600-by-1,200 resolution, 700KB) JPEG image file took about 4 minutes to import. At that rate, transferring the camera's full 7MB of

built-in memory would take well over half an hour. Thanks to the Go Wireless's USB and video output, we were able to see our muddled photos on the big screen faster. Yay.

Maybe in the future, digital cameras will send images of suspected miscreants to a Bluetooth-enabled 2004 Acura 3.2 TL in a special episode of Knight Rider, but at press time the only useful application of the camera's Bluetooth capability we could think of would be sending low-res images to a Bluetooth-enabled PDA or mobile phone.

Unless you're absolutely dying for a Bluetooth-enabled camera this instant, avoid this one. The novelty of wireless image-transfer doesn't redeem the camera's overall dismal performance.

—Noah Tsutsui



**COMPANY:** Concord Camera  
**CONTACT:** 954-331-4200, [www.concordcam.com](http://www.concordcam.com)  
**PRICE:** \$150

**REQUIREMENTS:** USB- or Bluetooth-equipped Mac, Mac OS 10.2 or later for Bluetooth support

**GOOD NEWS:** Comes with Bluetooth dongle. Allows USB transfers.  
**BAD NEWS:** Feels cheap. Performs like a toy camera.

MacAddict RATED





# MicroGB800

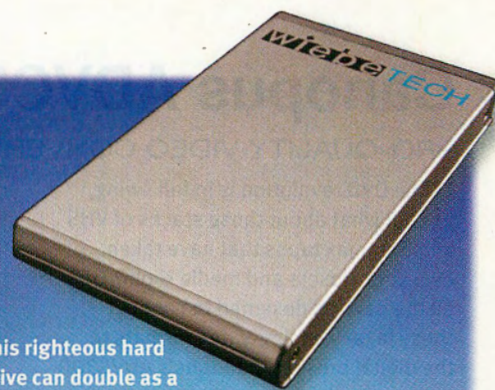
FAST, HOT FIREWIRE 800 HARD DRIVE



The FireWire 800 scene is starting to heat up—literally. WiebeTech's latest hard drive, the MicroGB800, impressed us in every way, but especially with the high temperature of its anodized aluminum case after regular use. Hot or not, the MicroGB800's sexy casing, speedy FireWire 800 and USB 1.1/2.0 performance, and all-we-need accessory kit makes it our new favorite portable hard drive.

The MicroGB800 comes with two FireWire cables, one 9-to-9-pin for FireWire 800-equipped Macs and one 6-to-9-pin for connecting to FireWire 400 ports; a USB 2.0 cable; AC power supply (though the drive can run from FireWire bus power); and a snazzy faux-leather carrying case.

WiebeTech sells the drive in sizes from 20GB (\$239.95) to 80GB (\$369.95); we tested the performance leader of the pack—a 60GB speedster spinning at 7,200 rpm (the smaller MicroGB800 drives house 5,400-rpm mechanisms, while the 80GB version packs a pokey 4,200-rpm one). In action, the drive delivered sustained read and write speeds of 35 MBps shuttling a tubby 2GB file to and fro—but only to and from another FireWire 800 drive. Large-file transfer over FireWire 800 with a 1.25GHz G4 PowerBook topped out at 20 MBps (read) and 21 MBps (write). Smaller files moved almost as fast: Our 100MB test files reached speeds



This righteous hard drive can double as a hand warmer.

of 21 MBps (read) and 19 MBps (write), while a 100MB folder full of 4MB files hit 20 MBps (read) and 17 MBps (write).

Bottom line: This drive is as fast as many full-size units, looks great in anodized aluminum, and doubles as a hot plate.—*Niko Coucouvanis*



**COMPANY:** WiebeTech  
**CONTACT:** 316-744-8722,  
www.wiebeotech.com  
**PRICE:** \$429.95 (60GB 7,200-rpm model)

**REQUIREMENTS:** FireWire  
or USB-equipped Mac, Mac OS  
9.1 or later

**GOOD NEWS:** Small. Sleek. Fast. All necessary  
cabling included.  
**BAD NEWS:** Runs way hot.

**MacAddict RATED**  
  
**GREAT**

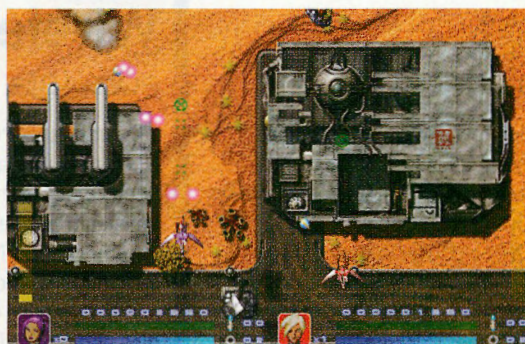
PHOTOGRAPH BY MARK MADEO

# Active Lancer

CLASSIC SCROLLING ARCADE GAME

Arcade fans hungry for an old-school vertical scroller: Prepare to feast on Active Lancer. You pilot an AK-71V3 Lancer—a suit of armor with wings—shooting enemy ships and ground targets through fifteen levels. Although all this shooting is a bit repetitive, the high-energy soundtrack kept us actively lancing for hours.

Active Lancer's storyline is of the familiar "shoot-the-bad guys" genre. You assault the home world of the nasty Cherries in five different areas, from deserts to snowcaps. However, the game adds some interesting gameplay options. For example, in multiplayer mode, two players (either on one Mac or over a network) cooperate in wreaking destruction on the Cherries, each flying their own Lancer with an arsenal of



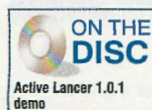
Active Lancer revives the top-down scroller with optional side-by-side multiplayer mode.

five weapons, including the straight-shooting laser and our fave, the self-guided plasma gun. Each weapon has its own charge ability—just hold down the fire button, wait for the weapon's bar to fill, then release for a megashoot. You can handle air-to-ground offense well

with bombs, or you can wait for a red target to appear around a tank, and then release your auto-lock missiles. When things get hairy, press Shift to invoke Fury Rage, and go berserk on your foes with a temporary burst of extra speed and firepower. Survive, and you can trade your points at the Lancer store for upgrades and extra life.

Active Lancer will appeal to hardcore arcade junkies and newbies alike—it's easy to get the hang of and easy to get caught up in. The soundtrack is awesome, and we'd say that even if we didn't know the maestro (*MacAddict* alum Andrew Tokuda). This shooter's only real flaws are repetitive gameplay and a lack of visual innovation.

—*Matt Osborne*



**COMPANY:** Freeverse Software  
**CONTACT:** www.freeverse.com  
**PRICE:** \$19.99

**REQUIREMENTS:** 300MHz  
G3 or faster, Mac OS 8.6 or later,  
56MB RAM, 330MB disk space

**GOOD NEWS:** Nostalgic arcade-style shooter with  
nifty new elements. Good music.  
**BAD NEWS:** Repetitive gameplay. Not much visual  
innovation.

**MacAddict RATED**  
  
**SOLID**



# Canopus ADVC300

## PRO-QUALITY VIDEO CONVERTER

The DVD revolution is in full swing, but what about those stacks of VHS and Betamax tapes that have taken over your closets and media room? Of all the devices designed to connect these legacy analog-video formats to the digital present, Canopus's ADVC300 delivers the best conversion quality, head and shoulders above that of the others we've tested.

The ADVC300 is a fully self-contained, bidirectional conversion device, which accepts both composite and S-Video analog signals to digitize and pipe digital video into your Mac via FireWire (cable included). It can also act as a stand-alone converter without requiring a Mac at all; if you want to convert your High-8 tapes to MiniDV, simply plug your two camcorders into the ADVC300 and press play on one, record on the other.

Dumping QuickTime movies to a VHS tape is equally effortless.

The included Picture Controller software provides full control over audio level and color, plus fine-tuning for many of the advanced filtering and image-stabilization controls built into the hardware. The inclusion of a TBC (time base corrector) allows for accurate conversion of video from the cheapest VHS deck, with rock-steady picture quality and excellent color reproduction. Another great feature is the locking option for picture and audio, which guarantees that captured audio never drifts out of sync with the picture.



The ADVC300's pro features, like time-base correction and audio syncing, set it apart from other video converters.

We're thrilled with the ADVC300's ease of use and conversion quality. Your video-editing software handles the capture process directly—we used Apple's iMovie and Final Cut Express—and the resulting captures were, in a word, perfect. In the end, that's the only thing that really matters.—David Biedny



**COMPANY:** Canopus  
**CONTACT:** www.canopus.com  
**PRICE:** \$549 (\$475 street)

**REQUIREMENTS:**  
Mac OS 10.2.7 or later

**GOOD NEWS:** Excellent image quality.  
Audio-synchronization lock. Stand-alone operation.  
**BAD NEWS:** Pricey (but worth it).

**MacAddict RATED**  
●●●●●  
**AWESOME**

# G5 DeskMount

## STURDY G5 MOUNTING BRACKET

We hate the thought of parking our Power Macs on the floor, especially the ogle-worthy, elegant G5, which belongs on a pedestal—or at least perched proudly on a desktop. But to paraphrase Little Red Riding Hood, sometimes it's too freakin' big.



A dusty floor is no place for a Mac.

Marathon's DeskMount suspends your Power Mac under your desk and off the floor, so it's safe from dust bunnies and other floor-dwelling crud. Attaching the DeskMount requires some hole drilling and screw turning, but it's simple work. Once attached, the device's nonslip coating kept our Mac in place and didn't gunk up its finish.

Ultimately, we'd hate to banish the beautiful G5 below deck, but if we had to, we'd mount it on a DeskMount.—Niko Coucouvanis

**COMPANY:** Marathon Computer  
**CONTACT:** 800-832-6326 or 615-367-6467,  
www.marathoncomputer.com

**PRICE:** \$59  
**REQUIREMENTS:** G5 Power Mac  
(G3/G4 version also available)

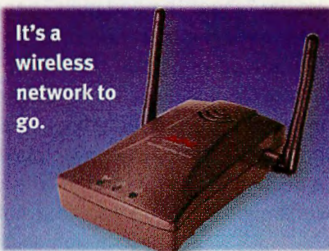
**MacAddict RATED**  
●●●●●  
**SOLID**

**GOOD NEWS:** Easy to use.  
Helps keep G5 free of dust bunnies.  
**BAD NEWS:** We prefer our G5 on top of our desk.

# Wireless Mobile Router

## PORTABLE WIRELESS ROUTER

Setting up APC's Wireless Mobile Router is as close to plug-and-play as network setup gets. Everything you need comes in the box: a slight, travel-friendly AC adapter; an even friendlier power-over-USB cable; and a three-foot Ethernet cable. The provided configuration utility works on any Java-enabled Web browser. It let us easily set up DHCP and NAT service to share files and a broadband internet connection. Despite 802.11b's limited (11Mbps) speed, networking doesn't get much more portable—or easier—than this.—Niko Coucouvanis



It's a wireless network to go.

**COMPANY:** APC  
**CONTACT:** 877-272-2722,  
www.apc.com

**PRICE:** \$69.99  
**REQUIREMENTS:** Mac or iBook with AirPort card or other 802.11b-compatible wireless adapter

**GOOD NEWS:** Works as advertised. Easy to set up.  
**BAD NEWS:** AirPort non-Extreme—aka 802.11b—is slow.

**MacAddict RATED**  
●●●●●  
**SOLID**



# theHotList

THE BEST OF THE BEST FROM RECENT REVIEWS

SHOPPING?  
HERE'S WHAT WE  
RECOMMEND

## NEW THIS MONTH



## Native Instruments Absynth 2

According to MacAddict contributing editor and audio veteran David Biedny, this full-featured app is “the most capable MIDI software synthesizer available.”



## Freeverse Software ToySight

MacAddict Reviews Editor Niko Coucouvanis calls this Webcam-controlled game “seriously innovative technology and a hoot to play.”

## You Software You Control

Executive Editor and productivity guru

Cathy Lu says this app is “the kind of software utility that excites us—and that doesn’t happen very often.”



## SOFTWARE

### AUDIO

IK Multimedia AmpliTube Live	\$129.00	Nov/03, p46	Don't think software can replace monster guitar amps? It can.
Native Instruments Absynth 2	\$299.00	Apr/04, p42	This software synth can create audio magic like no other.
Propellerhead Software Reason 2.5	\$449.00	Sep/03, p55	It's earned its rep as the top software sound studio.

### GAMES

Freeverse Software ToySight	\$34.95	Apr/04, p50	Use your Web cam to play this game—it's as cool as it sounds.
MacSoft Halo: Combat Evolved	\$49.99	Mar/04, p38	It's as awesome as your Xbox buddies said it was.
MacSoft Neverwinter Nights	\$49.99	Jan/04, p54	Flaunt your Dungeons & Dragons skills in the best RPG ever.
MacSoft Unreal Tournament 2003	\$49.99	Oct/03, p44	Blood and gore. Violence. More blood and gore. More violence.

### GRAPHICS & LAYOUT

Adobe Acrobat Professional 6	\$449.00	Nov/03, p50	If you're in pro publishing, this is one must-have app.
Adobe InDesign CS	\$699.00	Feb/04, p46	More features and easier navigation makes layout a snap.
Adobe Photoshop CS	\$649.00	Feb/04, p44	Just when you thought Photoshop couldn't get better, it did.
Adobe Photoshop Elements 2	\$99.00	Dec/02, p40	This app has most of Photoshop's power for \$550 less.
FontLab 4.5.2	\$549.00	May/03, p53	The font editor all we type geeks have been waiting for.
Macromedia Dreamweaver MX 2004	\$399.00	Jan/04, p48	Our favorite Web-design tool adds improved CSS support.
Macromedia Flash MX 2004 Professional	\$699.00	Jan/04, p48	Don't know how to write code? Flash MX will do it for you.
Macromedia FreeHand MX	\$399.00	Jun/03, p49	In the race with Adobe Illustrator, FreeHand pulls ahead.

### PRODUCTIVITY & UTILITIES

Apple Keynote	\$99.00	Apr/03, p48	This presentation app was built for Mac OS X—and it shows.
Bare Bones Software BBEEdit 7.0.1	\$179.00	Mar/03, p52	By far the most powerful text editor money can buy.
Microsoft Office v. X	\$399.00	Feb/02, p42	The 800-pound gorilla of productivity applications.
You Software You Control	\$49.95	Apr/04, p45	This menu utility increases your control over your Mac.

### VIDEO AND ANIMATION

Adobe After Effects 6.0	\$649.00	Dec/03, p49	This motion-graphics stud improves its 3D powers.
Apple DVD Studio Pro 2	\$499.00	Dec/03, p58	Apple's essential DVD-burning app is still the one to beat.
Apple Final Cut Pro 4	\$999.00	Sep/03, p44	This kick-ass video-editor now includes four new apps.

## HARDWARE

### ACCESSORIES

Kensington Expert Mouse	\$127.95	Oct/03, p60	Optical trackball plus scroll wheel equals killer controller.
MacMice The Mouse	\$39.99	Mar/04, p61	This is the mouse that Apple should ship with all its Macs.
Microsoft Wireless IntelliMouse Explorer	\$64.95	Jan/04, p57	Our favorite mouse adds horizontal scrolling.

### AUDIO & VIDEO

ADS Technologies Pyro DV Drive	\$650.00	Jan/04, p55	Record DV video directly to this mobile encoder and drive.
Apple 20GB iPod	\$399.00	Jul/03, p44	The world's greatest MP3 player gets smaller and cooler.
M-Audio Ozone	\$399.95	Feb/03, p59	Need a portable audio/MIDI controller? Look no further.

### DIGITAL CAMERAS

Canon EOS Digital Rebel	\$999.00	Mar/04, p48	Finally, an affordable pro-quality digital SLR camera.
Canon PowerShot S230 Digital Elph	\$349.00	Mar/03, p48	A great 3.2-megapixel camera in a tiny, low-cost package.
Nikon Coolpix 5400	\$699.95	Dec/03, p22	This prosumer camera handles well and shoots even better.
Olympus C-4000 Zoom	\$449.00	Jan/03, p52	Great image quality, 4 megapixels, and versatile controls.
Olympus D-560 Zoom	\$229.00	Dec/03, p22	This affordable point-and-shoot cam provides great images.

### DISPLAYS

Apple Cinema HD Display	\$1,999.00	Aug/02, p40	This 23-inch, 1,920-by-1,200-pixel beauty inspires lust.
Formac gallery 2010	\$1,199.00	Jan/03, p47	Bright, fast, huge—and it costs only \$.0006 per pixel.

### PRINTERS

Brother HL-1870N	\$699.99	Aug/02, p45	Need a sturdy laser printer? This one's a workhorse.
Epson Stylus Photo 2200	\$699.00	Oct/02, p42	The most stunning photo printer we've ever tested.
HP Laserjet 1012	\$199.99	Mar/04, p51	Can a pint-sized, sub-\$200 laser printer be this good? Yep.

### STORAGE

LaCie d2 200GB FireWire 800	\$269.00	Jun/03, p47	FireWire 800 speed meets solid-as-a-rock construction.
OWC Mercury Elite Pro	\$289.99	Jul/03, p53	This 180GB FireWire 800 drive outpaces the competition.
Webtech Fire800	\$549.95	Dec/03, p53	Hefty 300GB capacity combines with speedy performance.

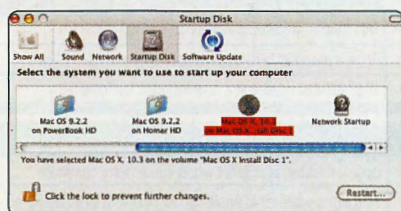


# ask us

## CD STARTUP TROUBLES

**Why can't I boot my Mac with a startup CD?**

If holding down the C key during startup doesn't boot your Mac from a bootable disc in its CD drive, hold down the Option key during startup to access the Startup Manager, which lists all available bootable volumes. If the CD shows up there, click it and then click the onscreen arrow. If that doesn't work, insert the CD after you've started up your Mac, choose it as the Startup Disk in the Startup Disk Control Panel (Mac OS 9) or System Preferences pane (Mac OS X), and then restart.



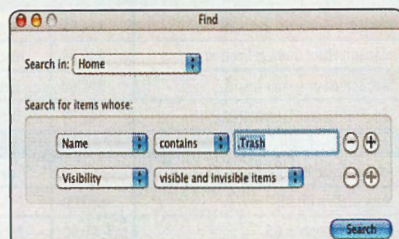
Select your bootable CD as your startup disk in the Startup Disk system preferences.

## TRASHY WINDOWS

In Panther, how can I put a copy of my

Trash folder into the sidebar of my Finder windows?

In the Finder, press Command-F to open a Find dialog, and then choose Home in the Search In drop-down menu. In the Search For Items Whose field, make sure the drop-down menus read Name and Contains, then type `.Trash` in the open field. Click the plus-sign (+) button, choose Visibility and



In Panther, find your `.Trash` folder and drag it to your Finder window's sidebar.

Visible And Invisible Items from the drop-down menus that appear, and then click the Search button. The search should yield one item named `.Trash`. Now open a Finder window and Option-drag the item from the search results window into any Finder window's sidebar.

## iDVD AUTOPLAY

**How do I create an iDVD slide show that loops automatically on a DVD player?**

Get iDVD 4, which is part of Apple's iLife '04 package (\$49, [www.apple.com](http://www.apple.com)).

To set the slide show to autoplay, click the Map button in the bottom pane of the iDVD window, and then drag your slide show into the first screen of the DVD menu. Double-click this screen to activate it. To loop your slide show, click the Loop Slideshow check box in the bottom pane of the window.

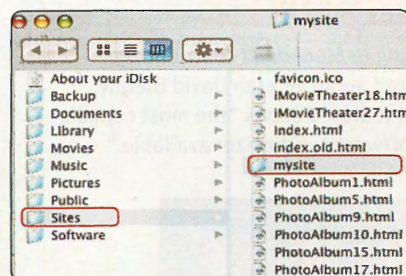


Set a slide show to loop automatically in your DVD player.

## PUT FLASH ON .MAC

**How do I publish a Dreamweaver-created HTML document and Flash (.swf) movie on my .Mac site?**

Copy all of your HTML files, including folders with images and Flash movies, to the Sites folder on your iDisk. Make sure to maintain the hierarchy inside this folder so your links continue to work. To access your site from the Web, type the



Publish your custom-created Web pages to the Sites folder on your iDisk.

following into your Web browser: <http://homepage.mac.com/user name/my site/html document name.html>. Substitute *user name* with your .Mac user name, *my site* with whatever you named your folder, and *html document name* with the name of your main HTML document.

# quick answers

## HARD MATH HELP

**What software could help me learn high-school math?**

Encore's Math Advantage 2004 (\$39.99, [www.encoresoftware.com](http://www.encoresoftware.com)) works in Mac OS 8.1 to OS X and teaches you

pre-algebra, geometry, trigonometry, calculus, and business math.

## FIND PATHS FAST

**How can I quickly see where a folder lives on my hard drive?**

Command-Click the folder icon in the title bar of a Finder window to see its Finder hierarchy.



## DRIVE DISMOUNT

**When I try to dismount an external FireWire drive by dragging it to the Trash, my Mac running Mac OS 9 tells me items are in use. Help!**

If you close all of your apps and still get this error, turn off File Sharing in the File Sharing control panel to dismount your drive.

## HIDE APPS FAST

**What's a quick way to hide application windows?**

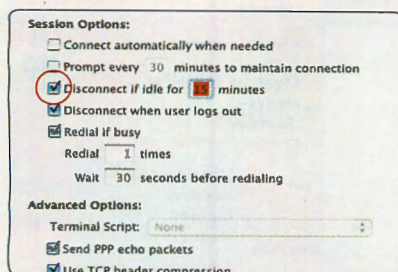
Command-H works with most apps. For



## KEEP MY MODEM CONNECTED

How can I tell Mac OS X's Internet Connect not to disconnect after 15 minutes of being idle?

In the Network system preferences, select Internal Modem from the Show pop-up. Click the PPP Options button



Uncheck this box, and your Mac won't kick you off the Internet.

at the bottom of the window, and then either uncheck the Disconnect If Idle For 15 Minutes check box or change 15 minutes to your desired amount of time.

## DITCH MAC OS X'S LANGUAGE FILES

How do I rid myself of hundreds of unneeded language files in Mac OS X?

Your best bet is to be proactive when installing Mac OS X by choosing the installer's Customize option and deselecting foreign languages you don't need. If you already installed Mac OS X and are running Mac OS 10.2 (Jaguar), use Mike Bombich's free utility Delocalizer (<http://software.bombich.com/local.html>) to delete unwanted language files and free up disk space. Delocalizer doesn't officially support Mac OS 10.3 (Panther), although many

the rest, hold down the Option key while clicking the desktop or the app's Dock icon.

## CAMERAS FOR IPHOTO

I'm thinking about buying a digital camera. Which ones work with iPhoto? Check out Apple's list of compatible cameras at [www.apple.com/macosx/upgrade/cameras.html](http://www.apple.com/macosx/upgrade/cameras.html).

## REVIVE MAC OS 9 FONTS

How can I make my Mac OS 9 fonts available to Mac OS 10.3?

You need to reselect your System Folder

# UNIX UNIVERSITY

## CREATE A FOLDER

How do you create a folder from the command-line?

Use the `mkdir` (make directory) command.

To create a folder called *newdirectory* at the root level of your drive, type:

```
mkdir /newdirectory
```

To create a directory called *babypix* in your pictures folder, type:

```
mkdir ~/pictures/babypix
```

You can also create multiple nested

directories using the `-p` switch.

To create a directory called *levelthree* within a directory called *leveltwo* within a folder called *tolevel*, for example, you would type:

```
mkdir -p /tolevel/leveltwo/(no space) levelthree
```

Use the `-m` switch give other users read/write privileges. Type the following to make the folder *foreveryone* available to, well, everyone:

```
mkdir -m +rw /foreveryone
```

Panther users report using the app successfully.

## THE BROKEN FOLDER

During startup, my iMac goes gray for several minutes, and then displays a black-and-white folder torn in half. How bad is that?

Very bad. This indicates a severely corrupt Mac OS X installation. To resuscitate your Mac, boot up with your Mac OS X CD (insert the CD, restart your Mac, and hold down the C key). Next, choose Disk Utility from the Installer menu to repair your hard disk. Rerun the Mac OS X installer to reinstall Mac OS X to get your Mac working again—hopefully your data will still be intact.

## SHUN THE SOLIDUS

I want to use mm/dd/yyyy dates in file and folder names—why won't Mac OS X let me?

That forward-slash (/), or *solidus*, is a big no-no for file or folder names in Unix-based operating systems and Windows file systems. Unix uses the solidus as a

path separator—for example, it would see a folder named 1/30/2004 as a folder named 2004 in a folder named 30, inside a folder named 1. Curiously, you can use the solidus when renaming files and folders on the OS X Desktop—a holdout from the old HFS file system used in earlier Mac OS versions—but it's still not a good idea. Because you can't type in a solidus in the Save As dialog of a Mac app, use a hyphen or underscore instead.

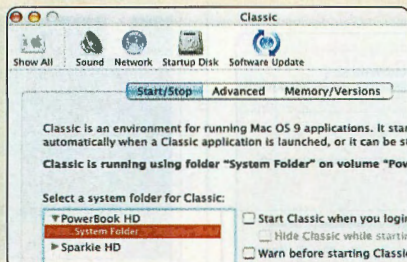
## SHARE TUNES

I purchased music from the iTunes Music Store on one Mac and want to transfer it to another Mac (both are authorized to play Music Store tracks). What's the best way to do this?

Unfortunately, the best way is the old-fashioned way: by hand. If both Macs can access your .Mac account, you can use your iDisk to transfer the music. Otherwise, use a CD-R/RW, external hard disk, or Zip disk—remember them?—to move it. Purchased music, organized by artist and album, resides within your *user name* > Music > iTunes > iTunes Music folder. The fastest way to find what you've purchased is to look in the iTunes Purchased Music Playlist or do a Finder search for .m4p (AAC) files.

Seven years of handling tech support for Apple, Power Computing, and a Texas school district have given Buz Zoller Mac superpowers.

in the Classic system preference to make your fonts available again.



Reselect your Mac OS 9 System Folder here if your Mac OS 9 fonts disappear.

**Submit** technical questions or helpful tips directly via email ([askus@macaddict.com](mailto:askus@macaddict.com)) or c/o MacAddict, 150 North Hill Dr., Brisbane, CA 94005.



# Clean Up Your Mac

EASY

by Narasu Rebbapragada

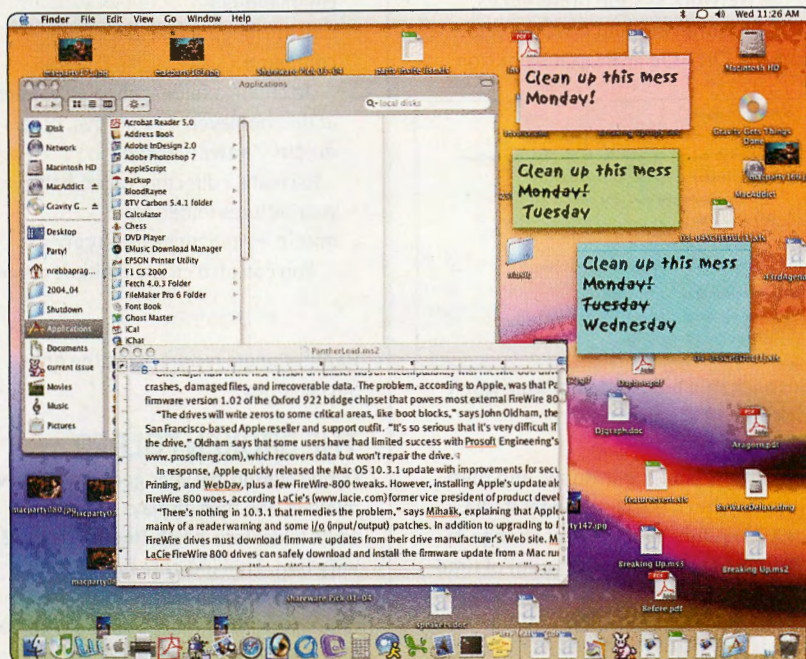
## WHAT YOU NEED

Any Mac running Mac OS 10.2 or later

**C**leaning is an activity you probably spend plenty of time avoiding, whether it's cleaning your house, dog, closet, or Mac. But once tackled, it doesn't take nearly as much time as you'd think. With your house, dog, and closet, you're on your own—but if your Mac is a mess, we can help.

While we can't tell you what to do with all the personal documents scattered around your Mac, we can provide you with a plan of attack for clearing out all the nooks and crannies, where errant files and folders lurk and ultimately slow down your system. Do this monthly, and your Mac will run faster, cleaner, and more reliably. As always, be sure to back up your system before proceeding with the cleanup—while the

following steps are benign on a healthy Mac, they can reveal larger problems on a sick one.

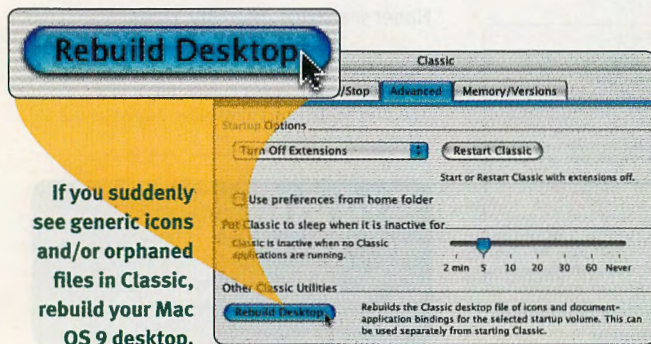


If your desktop chaos looks more like a Pollock painting than a place to work, don't despair. There's hope for you packrats.

## Cleanse Your System

### 1 Rebuild Your Desktop

This trusty old maintenance maneuver keeps the Mac OS 9 side of your Mac organized. Common symptoms of an OS 9 desktop on the fritz include files displaying generic document icons instead of the default ones, and orphaned files that suddenly can't find their creator applications. To rebuild the desktop, open System Preferences, click Classic to open its preferences, start Classic if it isn't already running, click Advanced, and then click Rebuild Desktop at the bottom of the dialog.



### 2 Zap Your PRAM

If your Mac has been acting sluggish, resetting (aka zapping) your PRAM (parameter random access memory) and NVRAM (nonvolatile random access memory) may help. Depending on what model you have, your Mac stores information such as clock settings, speaker volume, preferred startup disk, Disk Cache, and more in PRAM or NVRAM—resetting restores this info back to factory defaults, which can speed things up. To do this, reboot your Mac while pressing Command-Option-P-R until you hear the startup chime for the second time.

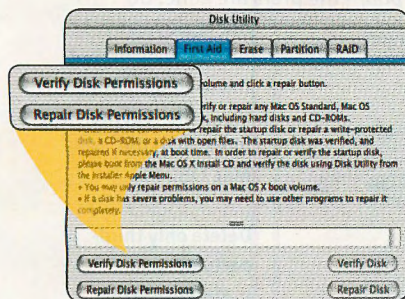


Zapping your PRAM and NVRAM can speed up a sluggish Mac—these are the key ingredients.



### 3 Repair Permissions

When file or application permissions get damaged, they can cause your Mac to run slowly, so repair them periodically—especially after installing new software. Open Disk Utility (Applications > Utilities) and choose a volume from the left pane. Click the First Aid tab and then click Verify Disk Permissions to see what needs fixing, if anything. If you spot troubles, click Repair Disk Permissions to fix them.



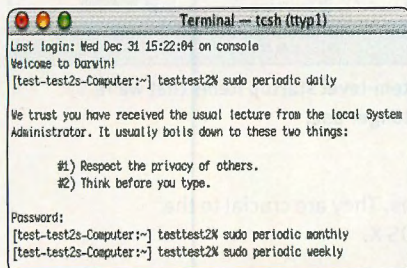
File permissions you aren't even aware of can get damaged, so verify and repair them periodically to keep your Mac running smoothly.

### 4 Run Prescheduled Tasks

Mac OS X's Unix core contains basic maintenance tasks that automatically clean up old log and cache files. However, they're scheduled to run weekly in the middle of the night—and because your Mac is probably shut down at this specified time, they don't run. To run them manually, launch the Terminal (Applications > Utilities) and execute the following commands one at a time—you need your admin password to invoke the sudo command:

```
sudo periodic daily
sudo periodic weekly
sudo periodic monthly
```

If you've never run these before, don't freak out if your system seems suspended for several minutes—the task has finished when you see a prompt. When finished with all three tasks, reboot your Mac.



Rather than leave your Mac running through the wee hours, use the Terminal to run prescheduled maintenance tasks at your convenience.

## Helpful Software

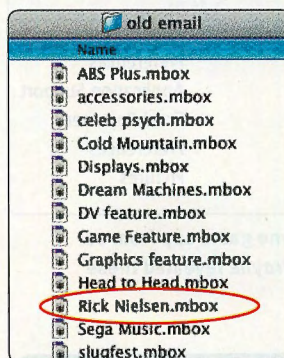
Just like household chores, you can have someone—or something—do everything for you.

**MacJanitor** (free, [http://personalpages.tds.net/~brian\\_hill/macjanitor.html](http://personalpages.tds.net/~brian_hill/macjanitor.html)) This free app performs those pesky Unix maintenance tasks if you're daunted by Terminal commands.

## Prune Files and Folders

### 1 Clean Out Old Mail

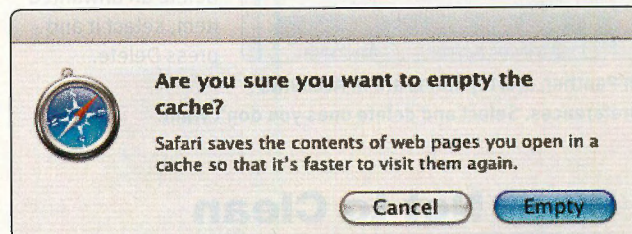
If you're like us, your email folder contains gigabytes of data that you simply can't bear to delete. So archive it. Create a new Finder folder and then drag your email app's in-box and/or any message folder to this folder to create an .mbox file, a standard Unix text archive format (note: in Mail, you can't drag the in-box, but you can drag all of its other folders). Then burn the .mbox collection to disc and delete the folders from your mail folder. The next time you need to access them, simply pop in the CD and import an .mbox file back to your email app for viewing.



Here, we archived our old Entourage email folders as .mbox files—hey, you never know when you'll need a good witticism from Cheap Trick's guitarist.

### 2 Cache Out Your Browser

You pay for broadband, so why does your surf speed seem so slow? If you've amassed a huge Web browser cache, it can bog down performance. The solution? Flush it. If you use Safari, just press Command-Option-E to empty the cache. In Internet Explorer, select Preferences from the Explorer menu, select Web Browser in the resulting dialog, select Advanced, and then click Empty Now in the Cache portion of the dialog.



Clear the cache. Clear your clutter. Speed up your surfing. 'Nuff said.

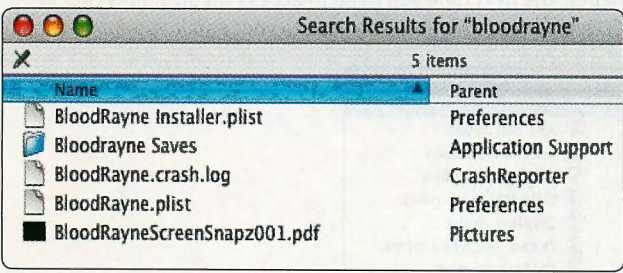
**Cocktail** (\$11.95, [www.macosxcocktail.com](http://www.macosxcocktail.com)) This shareware app gives you a front-end interface to some Unix maintenance tools and interface customizations.

**Spring Cleaning** (\$49.99, [www.aladdinsys.com](http://www.aladdinsys.com)) If you're willing to part with \$50, this app will do most of this how-to for you. It also comes with Secure Delete, a digital document shredder for trashing files to the point of no return.



### 3 Purge File Residue

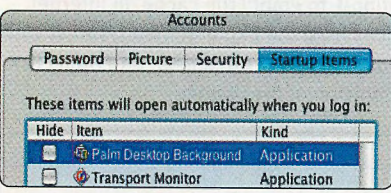
Even after you delete unwanted applications, remnant files can linger in your Preferences, Application Support, and Logs folders (*user name* > Library), taking up space. Go through these folders and weed out files bearing app names you no longer have. Check inside folders for important files before you delete them. Or use the search command (Command-F) to search for unwanted apps by name. To get rid of old installer files and archives, do a search for .dmg, .sit, and .tgz files. Warning: Only delete your user folder's Library files, not root ones (see "What Not To Clean," below).



Even though we deleted our Blood Rayne game app from our Applications folder, a search for *bloodrayne* revealed these remnant files.

### 5 Delete Startup Items

Some startup items launch transparently in the background, even ones you may no longer use. In Panther, click Accounts in System Preferences, and click the Startup Items tab. In Jaguar, click Startup Items in System Preferences to open the panel. Everything that launches at startup is stored here, including



items like old schedulers and Palm-syncing software you no longer use. To delete an unwanted item, select it and press Delete.

In Panther, startup items are in Accounts preferences. Select and delete ones you don't want.

## What Not to Clean

Important Mac OS X system files are alarmingly easy to throw away by accident thanks to their seemingly arbitrary names and storage places. A general rule of thumb: If you don't recognize a file, don't throw it out. Here are three file types you shouldn't touch unless you are absolutely sure what the file is and what the consequences of throwing it away are.

**Invisible Files** Unix comes with a host of invisible files you can't see in the Finder but can call up via the Finder's Find command, either by using the Visibility search parameter or via some navigational dialogs in Classic.

### 4 Ditch Unused Preferences

If you installed third-party apps you no longer want (such as interface-enhancing apps that show up only as preference icons), the preferences may still be in your System Preferences pane. Open System Preferences; if you see any preference you no longer want in the Other row—and in this row only—Control-click it and select Remove *Application Name* Preference Pane from the contextual menu. A dialog pops open, asking for an admin password. Type it, and *poof*—the prefs are gone. Do

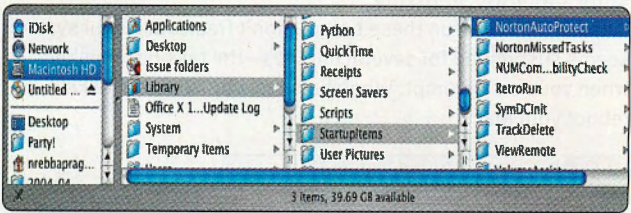


not remove any preferences except those in the Other row—the rest are integral to the Mac OS.

Delete only third-party system preferences from the Other row. The rest are crucial to running the Mac OS.

### 6 Extra Pesky Startup Items

Even after you delete stuff from the Startup Items preference pane, you may find yourself staring down a defiant one that you deleted but that still launches on startup. To get rid of it, go into your system Startup Items folder (Library > StartupItems) and heave-ho the troll to the Trash.



Here, we're deleting system-level startup items that we're 100-percent sure we no longer use.

Don't trash invisible files. They are crucial to the underpinnings of Mac OS X.

**System Files** With general maintenance, you shouldn't need to toss anything inside the System folder, so don't.

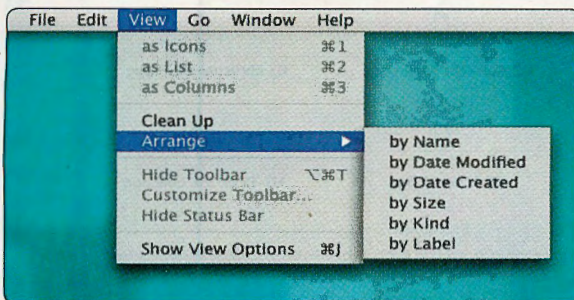
**Root-Level Files** It's easy to confuse root-level folders with user-level folders since they share the same names. However, deleting a file from the root-level Preferences folder (Macintosh HD > Library) can have much bigger consequences than deleting a file from the user-level Library folder (Macintosh HD > *user name* > Library) because it affects system-level items, such as Application Support and Keychain.



## Finishing Touches

### 1 Beautify Your Desktop

What's the point of vacuuming the inside of your car if the outside looks like it 4-wheeled through the Grand Canyon? The same can be said about your Mac. File away the messy file piles on your desktop, and keep only the ones you frequently need in sight. If you're a real neat freak, arrange your desktop icons alphabetically into neat little rows by selecting View > Arrange > By Name in the Finder. Then choose a serene desktop picture or pattern to show off your clean slate.



Arrange your icons and choose a calming background to beautify your desktop.

### 2 Blast Your 'Board

Rather than shake your keyboard upside-down until a key falls loose, you can safely oust dust bunnies and crumbs stuck between keys with a can of compressed air. For the best results, aim the nozzle at an angle to blast the junk out the side of your keyboard.



Clean out the bits of food, dust, and gunk from your keyboard with a can of compressed air.

### 3 Clean Screen

To clean your LCD or CRT screen safely, use either a screen cleanser like Monster iClean Screen Cleaner (\$14.95, [www.monstercable.com](http://www.monstercable.com)) or plain water with a lint- and static-free cloth. Or try our own Rik Myslewski's method: Use a Post-it Note's sticky side to pick up lint and dust off of your Mac's screen and body.

Clean your screen with either a cleanser like Monster's iClean or plain water.



News Editor Narasu Rebbapragada would rather clean her Mac than the burnt cake pan in her sink.

## Stash and Hide Sensitive Files

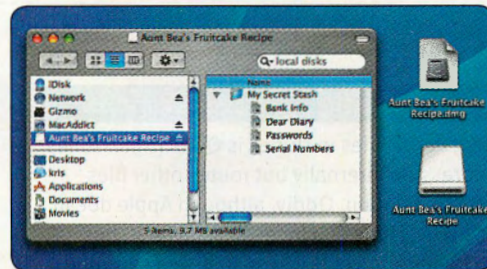
TRICKY

by Kris Fong

### WHAT YOU NEED

Mac OS 10.2 or later

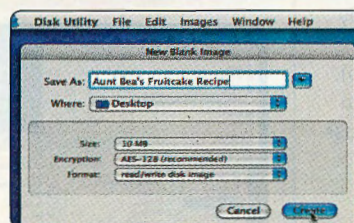
Anytime you leave your Mac unattended, it's a prime target for snoops. If coworkers, friends, or spouses can't fight the urge to eyeball your files, at least you can protect your most private (or incriminating) stuff. Here's how to encrypt files and make them invisible.



Even if savvy snoops uncover your invisible file—despite its unassuming name—encryption will send hackers packing.

### 1 Encrypt a Volume

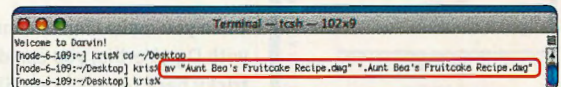
In Jaguar, launch Disk Copy and select File > New > Blank Image. In Panther, launch Disk Utility and select Images > New > Blank Image. In the resulting dialog, give the file a name that won't inspire deviants to open it. Select AES-128 from the Encryption pop-up, and click Create. In the resulting dialog, type a password, uncheck the Remember Password box, and click OK to generate a .dmg file and volume. Stash your secret stuff in the volume and drag the volume to the Trash to unmount it.



Encryption keeps files secure.

### 2 Make It Disappear

Launch the Terminal (Applications > Utilities), type `cd ~/Desktop`, and press Return to navigate to your desktop. Then type `mv "your file name.dmg" ".your file name.dmg"` and press Return to make the file disappear. Whenever you need to access it, use the Terminal to navigate to your desktop, and type `mv ".your file name.dmg" "your file name.dmg"` to make the file reappear.



Make a file or folder invisible by renaming it with a period.



# Play Oggs in iTunes

EASY

by Paul Yoon

## WHAT YOU NEED

Mac OS X 10.2 or later (\$129, [www.apple.com](http://www.apple.com))

QuickTime 6.2 or later (QuickTime Pro required for encoding, \$29.99, [www.apple.com](http://www.apple.com))

Ogg Vorbis Decoder Plugin for QuickTime 6.2+ (free, <http://illadvised.com/~jordy>)

Ogg Vorbis Icon Code, optional (on the Disc)

**A**udiophiles can argue about audio codec sound fidelity all day long. Zzzzz. All we really care about is that our music sounds good. MP3 is still the dominant codec for distributing digital music, but the technology is patented, meaning someone somewhere is

paying for every MP3 you create. With iTunes, Apple foots the licensing bill. Other companies pass the fee to the customer by charging for their MP3-encoding apps. Thankfully, there are alternatives.

One of the most popular is Ogg Vorbis. Not



**Want better-quality audio without the licensing restrictions of MP3? Tweak QuickTime, and iTunes becomes Ogg Vorbis friendly.**

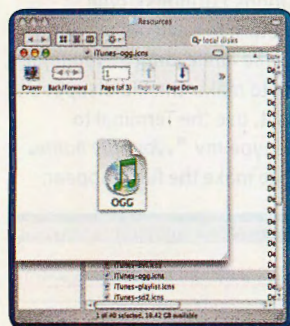
only does Ogg sound better than MP3 and produce smaller files, it has no licensing restrictions or fees, it gives you more control over the compression, and it's open source. While Apple doesn't provide support for it in iTunes, you can tweak QuickTime with a plug-in to make iTunes compatible with Ogg Vorbis.

## 1 Eye the Icon

The key to playing Ogg Vorbis files in iTunes is QuickTime. iTunes handles MP3 decompression internally but routes other files through QuickTime for translation. Oddly, although Apple doesn't officially support Ogg files, iTunes includes an icon for it, but you need to do an extra hack to get this icon to display on your Ogg files (otherwise, you get a generic blank-document icon). To see what it looks like, Control-click the iTunes application and select Show Package Contents from the contextual menu. In the resulting window, go to Contents > Resources to access a bunch

of audio icon files (interestingly enough, this includes one for WMA or Windows Media Audio). Double-click iTunes-ogg.icns to display the icon in Preview. Close the iTunes Contents window when you're done viewing.

**Once you make iTunes compatible with Ogg Vorbis, you can do a tricky hack to make Ogg files take on this appearance.**



## 2 Plug In and Play

Now make over QuickTime. Download Ogg Vorbis Decoder Plugin for QuickTime 6.2+ from the Web. To install it, double-click the disk image to expand it, and then navigate to Library > QuickTime. Drag and drop the OggVorbis.qtx file from the disk image into this QuickTime folder. To test it out, download an Ogg file (see "Hog Some Ogg," facing page, for Ogg Vorbis-friendly sites), and double-click it; a dialog pops up, telling you there's no default app to open the file. Click Choose Application. In the resulting dialog, navigate to and select iTunes, and click Open.

iTunes launches, imports the file into your Library, and starts playing the song. Ogg files will now launch in iTunes when double-clicked. That's it. You can stop now or continue with the icon hack.

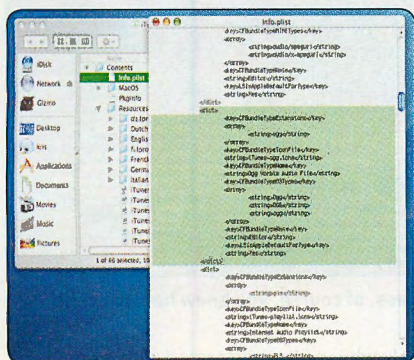
**Simply drop the Ogg Vorbis Decoder Plugin into the QuickTime folder to enable iTunes to play Ogg files.**





### 3 Extra Credit Trickiness

If you absolutely must have your Ogg files show the icon that Apple so thoughtfully provided, quit iTunes, make a backup copy (in case something gets messed up), and then open iTunes' package contents. Locate Info.plist in the Contents folder and open the file in TextEdit (drag the file to the app in the Dock). Scroll down until you find the section that contains all the CFBundleTypeExtensions code blocks, which are separated by <dict> tags. These code blocks tell the OS what icon to display for various audio file formats—you need to create a similar code block to display the Ogg icon. To spare you the burden, we typed the code out for you—on the Disc, open Ogg Vorbis Icon Code.txt in TextEdit, copy all the text, go back to Info.plist, and paste the text in between any <dict> and </dict> tag in the CFBundleTypeExtensions section. Then save the file and reboot your Mac, and all your Ogg files will now display the swank Apple-approved (well, sorta) icon they so richly deserve.



We followed Apple's alphabetical coding scheme and squeezed our Ogg extension code in between the .m3u and .pls audio extension code blocks.


### Hog Some Ogg

You've got your free decoder—how about some free music to go with it? Quite a few Web sites currently house Ogg Vorbis music downloads (along with the usual MP3s). Do a Google search for Ogg music downloads to find a bunch of individual sites, or check out these sources.

**Bedroomdjchoice** ([www.bedroomdjchoice.com](http://www.bedroomdjchoice.com)) If you like dance music, this site contains a bunch of DJ mixes—all in Ogg—that you can freely download once you register (also free).

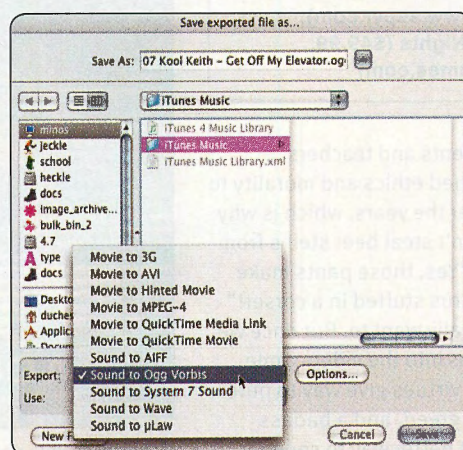
**RomBox** (<http://membrane.com/rombox>) You may have to do some hunting around, but this site hosts a lot of Oggs. You'll find pages for various artists who rock, rap, punk out, trip hop, and more.

**Vorbis.com** (<http://vorbis.com/musicsites.psp>) This Ogg Vorbis portal site lists a number of Web sites that stock Ogg downloads.

 Paul Yoon lives and works in San Francisco, and has a singular fascination with edible aquatic life.

### 4 Encode with QuickTime Pro

To create Ogg files, you must have QuickTime Pro to do the actual encoding. Keep in mind that you should only encode AIFF files (like those from an audio CD)—encoding MP3s, AAC files, or any other greatly compressed file format will only degrade sound quality. Open an AIFF file in QuickTime Player (assuming you've already installed the Ogg Vorbis Plugin), and select Export from the File menu. In the resulting dialog, select Sound To Ogg Vorbis from the Export pop-up menu. From the Use pop-up menu, select a bit rate for the encoding (Good, Better, or High) or if you're savvy to bit rates, click Option and fill in your bit-rate preferences. Then click Save to encode the file.



Once you've got the Ogg Vorbis Plugin plugged in, encoding Ogg files in QuickTime works the same as other conversions.

### Encoding Alternatives

While most of us rock 'n' groove with iTunes, some of you avoid the application like a plate of candied Brussels sprouts. If you're looking to put Ogg in your noggin, here are some alternative apps that can play and/or encode Ogg Vorbis files.

**Audacity** (free, <http://audacity.sourceforge.net>) This free open-source audio editor allows you to import, edit, play, and encode in multiple audio formats, including Ogg.

**Melody Assistant** (\$18, [www.myriad-online.com](http://www.myriad-online.com)) Not only does this way-cool app from Myriad Software import, play, and encode Ogg (along with other audio formats), but it can help you write music (if you know the difference between a note and a staff).

**Ogg Carton** (free, <http://oggcarton.sourceforge.net>) This iTunes alternative can rip, index, and play Ogg and MP3 files. It also supports playlists. (Warning: The site's front page contains what some may consider a racy image.)

**Ogg Drop** (free, [www.nouturn.com](http://www.nouturn.com)) Though the current version (at press time) had some issues with Panther, this simple Ogg Vorbis encoder from No U-turn Software works fine in Jaguar and any older Mac OS.



# Cheat Your Way through Mac Games

EASY

by Chris Barylick

## WHAT YOU NEED

Mac OS X (\$129, [www.apple.com](http://www.apple.com))

Any of the following games (or game demos): *WarCraft III: Reign of Chaos* (\$39.99, [www.blizzard.com](http://www.blizzard.com)), *Unreal Tournament 2003* (\$39.99, [www.macsoftgames.com](http://www.macsoftgames.com)), *The Sims* (\$49.99, [www.aspyr.com](http://www.aspyr.com)), or *Neverwinter Nights* (\$49.99, [www.macsoftgames.com](http://www.macsoftgames.com))

Our parents and teachers preached ethics and morality to us over the years, which is why we don't steal beer steins from bars or blurt out, "Yes, those pants make you look like a walrus stuffed in a corset!" even though we really want to. But once we transport ourselves into the video-game world, our angelic virtues give way to pure hedonism, power, greed, and a badass attitude. And what better way to conquer all than to cheat your way to the top? Machiavelli wouldn't mind, why should you?

In Mac games, most cheats are readily accessible. Enter the right command at the right time and you can become immortal, up your ammo, change the game difficulty, stockpile your character with every weapon from the get-go, and more. You may not be



If this were you, you'd be dead, dead, dead—unless, of course, you knew how to cheat.

able to explain adequately why you're now armed with a gun the size of Texas, but it makes the game a lot more fun. Here's how to activate cheats in four of the most popular Mac games. If you don't see your favorites here, check out "Command and Conquer the Easy Way," p75, for more cheating resources.

## WarCraft III: Reign of Chaos

► One of the most popular real-time strategy games on the market. Choose a character race and then build, upgrade, and lead your army against enemies while managing your town's

resources and defenses. To win, you must build and upgrade your army quickly and make sure that they have safe access to ample resources. However, this can take a lot of time. So let's cheat!

### 1 Get to the Console

This game features a built-in console system that allows you to simply type in cheat codes to activate them. Launch the game and press Return to call up a message box, the same type you use when you want to type a message to another player. Once you enter a cheat code, the console kicks in to activate your devious demand. Though there are tons of cheats you can employ in this game, the following are some of our favorites.

**Pressing Return brings up this message box; just type in a cheat code and press Return again to activate it.**





## 2 Become God

Invoke this cheat, and all your characters will be able to withstand any attack and kill any enemy with a single blow. Press Return to open the message field, and type *whosyourdaddy* to activate the cheat. When being invincible loses its appeal, type the code again to revert to normal—all your characters will return to their usual strengths.



Once you activate god mode, a mere peon peasant can single-handedly destroy a village.

## 3 Be Rich, Productive, and Lazy

You can gain supplies, wealth, and productivity from your people without doing the work yourself. To create more characters and buildings without earning the money to do so, type *greedisgood*, which awards you 500 gold and lumber points. To increase productivity, type *warpten* to make your characters build structures and mine gold faster than normal. To expand your town without honoring the game's supply requirements, type *pointbreak* to create unlimited characters without having to build food-supplying structures, such as farms. If you're too lazy to fight your battles properly, type *iseeadeadpeople* to reveal the entire land map and uncover your enemy's location.

Type *warpten*, and you can drive your townspeople to work at warp speed—maybe they should rename this cheat *kathielee*.



## Unreal Tournament 2003

► In what's arguably the best first-person shooter, your goal is to defeat opponents and advance through levels—in a nutshell, shoot everything that moves. The game rewards the player

who can kill quickly, shoot accurately, and escape from each encounter with the least damage. If you're a so-so player who could use some bragging rights, cheat.

## 1 Become a Superhero

If you're a poor shooter, you will die—and quickly. But you can make yourself an impossible casualty. Fire up the game and load a saved game or start a new one. Once your weapon shows up ready for battle, press the Tab key to call up the console. If you want to be completely invincible—meaning you can take a chestful of lead, rockets, and whatnot and walk away smiling—type *god*. If you'd rather fight admirably, heal your wounds instantly by typing *summon unreal.healthpack*. If you want to

reach inaccessible places, type *fly*, and you become a virtual Peter Pan (or Tinkerbell).

In god mode, you can endure a hail of rocket fire and take your sweet time lining up the perfect shot in the sniper scope.



## 2 Build Up Your Arsenal

When you're focused on shooting and dodging, who has time to scrounge up ammo and find alternative weapons? These codes will help you keep your eyes on your opponents instead of scavenging for supplies. Call up the console and type *allammo* to get maximum ammo for all your weapons. If you want the mother of all weapons, type *summon unreal.warheadlauncher* to arm yourself with the Redeemer—a guided warhead that happens to be the most powerful, destructive, and fun weapon in the game.



**Hasta la vista, baby!** You can shoot the Redeemer straight from the hip or fire it like a guided missile (left), controlling every second of its flight.





## The Sims

► Who thought the daily grind could be so entertaining? This game lets you live the lives of a group of people (roommates, friends, families, couples, and more)—including their daily activities, careers, and interactions with others.

### 1 Be Greedy

Launch the game and load a saved game or start a new one. To enter cheat codes, press Control-Command-Shift-C simultaneously, and a text field appears in the upper left where you can type in codes. To increase your worth, type *rosebud*—this instantly adds 1,000 Simoleons (the game's currency) to your bank account. Repeat the cheat multiple times if you feel like trumping The Donald's wealth. Don't like your family's current digs? Type *house* followed by a number from 1 to 10, and you can choose any house to live in without having to actually save money and buy it.



Live the high life by stealing the house of your dreams and all the Simoleons you can muster with a couple of cheat codes.

### 2 Improve the Quality of Life

Having bodies of water around to beautify the environment can improve your Sims' lives. Bring up the cheat box and type *water\_tool*; then place a swimming pool anywhere on the map and sculpt the environment to your liking. To get an idea of what engages your Sims, type *interests* to call up information about how to make the selected Sim happier. If you want a Sim to operate productively on autopilot (so you don't have to pay close attention), type *autonomy* followed by a number from 1 to 100—the higher the number, the better your Sims will manage their lives.



Take the guesswork out of making Sims happy—just type *interests* to find out what amuses a character.

## Neverwinter Nights

► One of the best role-playing games on the market, this game has you choosing a character, completing quests and tasks, slaying opponents, gaining experience, and earning gold to buy items and advance to the next chapter in the story. The key

to winning is building up a character strong enough to stand up to anything, and then using the best strategy to win battles against opponents. Of course, a bit of cheating will get you there faster.

### 1 Debug De Console

No matter how high your charisma score, you can almost always use help fighting monsters bigger and stronger than you. To activate cheats, launch the program and open a saved game or start a new one. Press the tilde (~) key to open the console and type *DebugMode 1* (it's case sensitive, so type carefully) to enable cheat-code entry, and press Return. You can now enter whatever cheat codes you like whenever you press the tilde key—you don't need to type the debug part again.

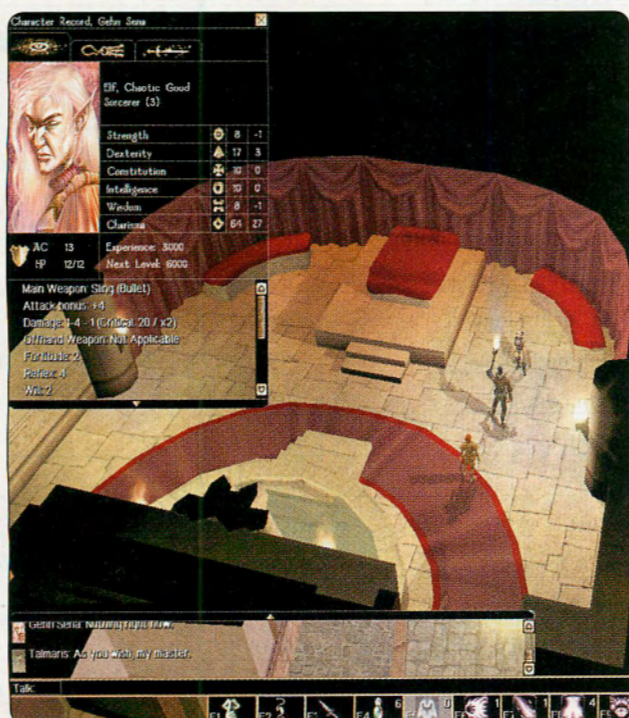
**Feeling insecure? Type *DebugMode 1* in the console field to enable cheat-code entry.**





## 2 Be Prince (or Princess) Charming

To get ahead, your character needs charisma to convince other characters that your decisions—no matter how questionable, immoral, or suicidal they are—are the right ones. Bring up the console and type *SetCHA*, a space, and a number from 9 to 50 to change your charisma—the higher the number, the more charisma you ooze. If you want to be invulnerable to damage, type *dm\_god*, which makes you invincible to every weapon or malfeasance that comes your way.



Up your charisma score, and you can charm the pants off anyone to get what you want.

## 3 Take the Pony Express

Patience may be an admirable virtue, but in the context of hours and hours of gameplay, it's sometimes a trait we lack. That's when we break out My Little Pony (brush not included). This cheat significantly speeds up your character's pace via a cute li'l hobbyhorse. Just type *dm\_mylittlepony* in the console and press Return. Your character, now straddling a hobbyhorse, will move faster than normal, albeit in a style unbecoming to anyone over the age of four.



Need to get a move on? This one-trick pony speeds up your travel time despite its dorky appearance. Giddyap!

## Command and Conquer the Easy Way

We don't have enough pages to cover every Mac game in existence, but if you're stuck on a level, don't have a lot of time to play, or just plain suck at games, here are some sites where you can find more cheat codes for Mac games.

**GameFaqs** ([www.gamefaqs.com](http://www.gamefaqs.com)) The best site for game cheat codes and walk-throughs, this site includes an abundance of cheats for both older and just-released Mac titles.

**Game Revolution** ([www.game-revolution.com/games/codes/mac/mac-codes.htm](http://www.game-revolution.com/games/codes/mac/mac-codes.htm)) This is a good site to check

out cheats for older games.

**IGN Macintosh Cheats** (<http://cheats.ign.com/lists/20107/068/index.html>) Once you click past the requisite advertisement, this site offers cheat codes for older Mac titles, including shareware.

**Mac ComputerUnderground** ([www.computerunderground.com/game/Mac](http://www.computerunderground.com/game/Mac)) This site offers game cheats for a variety of platforms and consoles. Unfortunately, the Mac cheat section is a few years out of date, but it's still viable.



While grad student Chris Barylick's WarCraft cheating efforts have yielded successful results, the IRS and death may not be quite as lenient.



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# Asus MyPal A620BT

## A FAST AND WELL-CONNECTED FRIEND

Geeks and gearheads have a passion for high-performance machines, tweaking their gadgets in every way possible to squeeze out those extra nanoseconds. The folks at Asus, known for making excellent PC motherboards, share that passion and released the MyPal A620BT PDA to prove it. With its sizzling performance, bright screen, Bluetooth, and long battery life, you may want to make the MyPal your pal, too.

A quick look at the MyPal says nothing of the outstanding performer within. Its plastic casing has the familiar brushed-aluminum look of many Pocket PCs, but there are a few differences. The record button is on the top rather than the side, which makes it less likely to be accidentally punched

as you pull the device from your pocket. The other big difference is the CompactFlash slot. Newer Secure Digital slots are now much more

common and arguably better than CF, so it's surprising that Asus has gone with the older media type. The slot has a removable panel, so it can accommodate larger CF add-in modules.

The A620BT is thin and light, at just 4.9 x 3.2 x 0.5 inches and 5 ounces. Asus claims that it's the smallest and lightest PDA with a CF slot, but we found that it weighed the same as an HP iPaq h2200, which is smaller but thicker. At any rate, the Asus is compact and pocketable — particularly for a CF

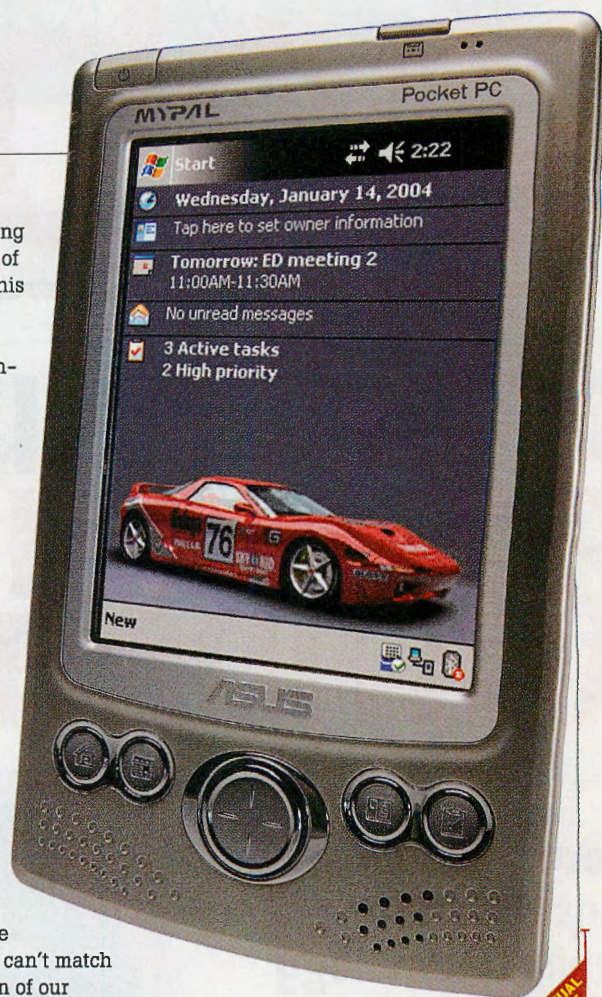
handheld. So if you're looking to maintain your collection of CF cards and peripherals, this is the PDA for you.

In most respects, the MyPal is a midrange to high-end Pocket PC. Its 400MHz Intel XScale PXA255 processor is near the top of the line, but its 64MB of RAM is average. However, it does have about 32MB of free nonvolatile flash memory for backing up your contacts database and other important data. While it can't boast high-speed Wi-Fi, the A620BT does have Bluetooth to differentiate it from lowlier Pocket PCs.

The MyPal is a true friend to the eyes and ears. The 320 x 240-pixel, transfective TFT offers up the standard 65,536 colors, but it is quite bright and high contrast. It can't match the higher resolution screen of our favorite, the Toshiba e805, but it is just as bright and easy to read. And though the integrated speaker is weak, the unit sounds great with headphones on. At its maximum volume, music verges on painful, just as it should.

Asus ships two software discs with the device, but there's not really much on them. One has the typical set of Outlook 2002 and ActiveSync 3.7 and links to AvantGo. The other includes Pocket PC themes, some free software, and game downloads. Of these, the best are IA Presenter, IA Album, and IA Zip (a WinZip-compatible compression utility). The most memorable game is *Dung Cleaner*, a *Lode-Runner* clone in which you dig holes to evade your pursuers and collect, well, dung.

Showing off in our performance tests, the MyPal systematically bludgeoned the competition in our benchmark tests. With a record-setting Spb Benchmark score of 1,691, the Asus was yards ahead of its closest competitor, the HP iPaq h4150. Battery life was also excellent,



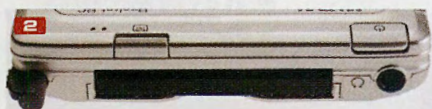
though not the best we've seen. The unit played video for four hours and 20 minutes, and it lasted for another hour and 15 minutes after the video stopped. But that's still better than most Palm devices and many Pocket PCs.

The MyPal A620BT may not have the most extensive spec set in the world, but in the end it's all about the performance. Asus could have made this product wholly irresistible had it included an SD slot and Wi-Fi, but it's still a lot of PDA for \$399. —Roger Hibbert



**BEST FEATURE** Record-breaking performance

**WORST FEATURE** CompactFlash slot instead of SD



A removable cover **1** offers easy access to the CompactFlash slot **2**.

<b>Asus MyPal A620BT</b>		<b>\$399</b>
<b>Weight:</b> 5 ounces	<b>Size:</b> 4.9 x 3.2 x 0.5 inches	
<b>Specs:</b> 400MHz XScale processor; 64MB of RAM; 64MB of ROM; 3.5-inch 320 x 240-pixel TFT; Bluetooth; CF slot; lithium-ion battery; Windows Mobile 2003		
<a href="http://www.asus.com">www.asus.com</a>		

### PERFORMANCE

	WORST		BEST
Spb Benchmark	708	1,691	1,691
Battery life [hours]	2:16	5:35	12:07



# Toshiba Satellite P15-S479

## THE PORTABLE HOME THEATER

The Toshiba Satellite P25 is a 10-pound hulk of a computer, a 17-inch widescreen that impresses with its thoughtful design, modern styling, and serious under-the-hood specs. Think of the P15 as the junior-varsity version.

Weighing in at 8 pounds on the nose, the P15's only noticeable difference is a slightly smaller screen, at 15.4 inches. The other features of the P25 are there, only less space is wasted on either

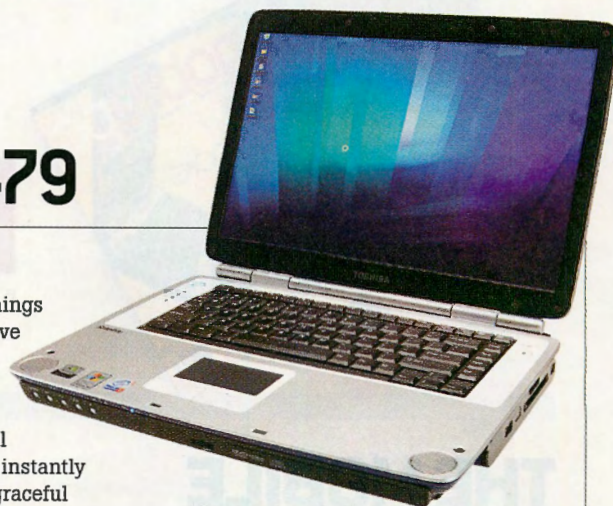
side of the keyboard. All things considered, we'd rather have the slightly more compact version, which costs up to \$1,000 less.

The Satellite P15 is a real computing showpiece that instantly gets people talking. More graceful curves have never been seen on a notebook computer, and the P15's booming speakers, gorgeous screen, and impressive keyboard all back up its thoughtful design. Under the hood, the Satellite is no slouch; while gaming performance could stand to be improved, the obvious tradeoff for an older Nvidia graphics card was made to keep the price down (hitting an irresistible \$1,799).

More than just a notebook, the P15 is also a Windows Media Center PC, with a built-in TV tuner and remote control. As with all Media Center machines, this

notebook doubles as a TiVo-style video recorder — and believe us, video looks far better on the Toshiba's screen than it does on most traditional CRTs.

With two hours and 42 minutes of battery life, daredevils might even take a stab at lugging the P15 along on a trip. You may not be comfortable trying to open the notebook in coach, but if nothing else, you're sure to impress the pants off the guy in the seat next to you. —Christopher Null



### PERFORMANCE

	WORST		BEST
Sysmark	78	179	218
Unreal	9.6	90.7	211.1
Battery	1:02	2:42	5:21

#### Toshiba Satellite P15-S479

\$1,799

Weight: 8.0 pounds Size: 13 x 10.8 x 1.2 inches

Specs: 2.8GHz Pentium 4; 64MB Nvidia GeForce FX Go5200; 512MB of RAM; 15.4-inch TFT; 60GB hard drive; CD-RW/DVD-RW/DVD-RAM drive; SD slot; 802.11g; Windows XP Media Center

www.toshiba.com



#### BEST FEATURE

Outstanding audio and video experience

**WORST FEATURE** Gaming performance a little weak

# Motorola i730

## BIG BROTHER'S FAVORITE CELL PHONE

The world has waited years for the development of e911, the location-based emergency service that promises to save lives through the cellular airwaves.

And as it turns out, businesses may get a little boost from the service, too. Offered by Nextel, Motorola's i730 iDEN phone features GPS tracking that may soon allow your company to

pinpoint your position to within 50 feet.

Nextel has offered walkie-talkie phones for years, and the i730 is the company's most advanced handset yet. With a 1.7-inch, 65,000-color screen and a large keypad, navigating the i730's menus is simpler than on most handsets. This is good, because the interface is more complicated than many conventional phones. Booting takes a

good 20 seconds, and shutting it down takes a dismaying 17 seconds.

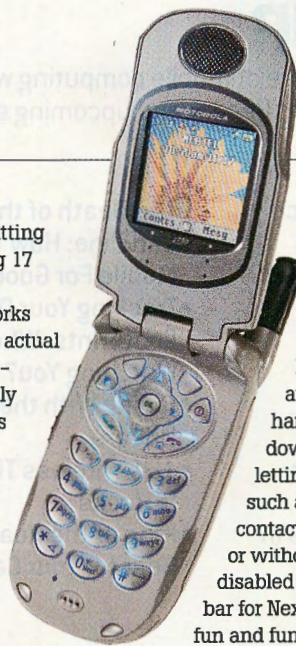
Fortunately, the i730 works much more quickly during actual use. Establishing a walkie-talkie connection takes only a few seconds, even across thousands of miles. Data connections through the WAP browser are peppy, and the phone supports AOL mail and AOL Instant Messenger so that you can keep in touch with your buddies on the road.

Being a walkie-talkie phone, the i730 has an excellent speakerphone mode that sounded great — on both sides of the conversation — in our tests. It also supports voice-activated dialing and doubles as a voice recorder for logging short memos or capturing important conversations. But watch out:

with a talk time of 3 hours and 22 minutes, all these extra features may shut you down prematurely.

As difficult as it may be to convince your flight attendants, the i730 features a handy airplane mode that shuts down its wireless features while letting you access important things such as date book entries, memos, contact information, and games. With or without GPS tracking, which can be disabled for privacy, the i730 raises the bar for Nextel handsets and brings all the fun and functionality of an afterhours cell phone to the long-trusted Direct Connect network Nextel made famous.

—Robert Strohmeier



**BEST FEATURE** Zippy push-to-talk service

**WORST FEATURE** Extremely bulky for a flip phone

#### Motorola i730

\$299

Weight: 5.1 ounces Size: 3.6 x 2.0 x 1.1 inches

Specs: iDEN; Direct Connect; GPS; WAP; Java; speakerphone; voice dialing

www.nextel.com





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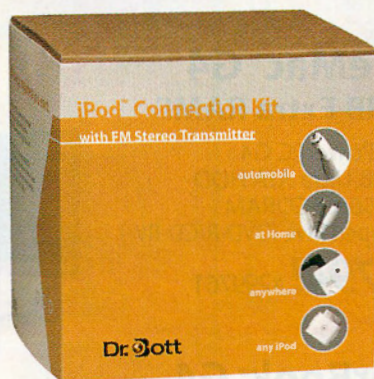
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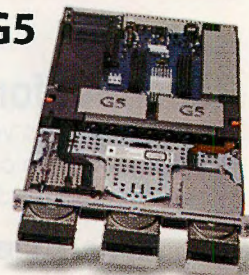


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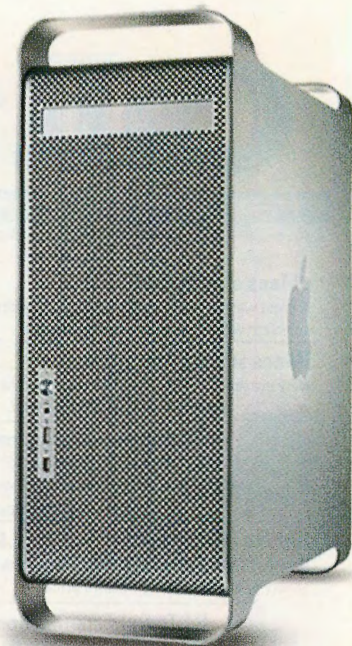
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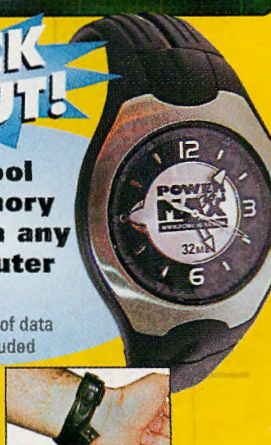
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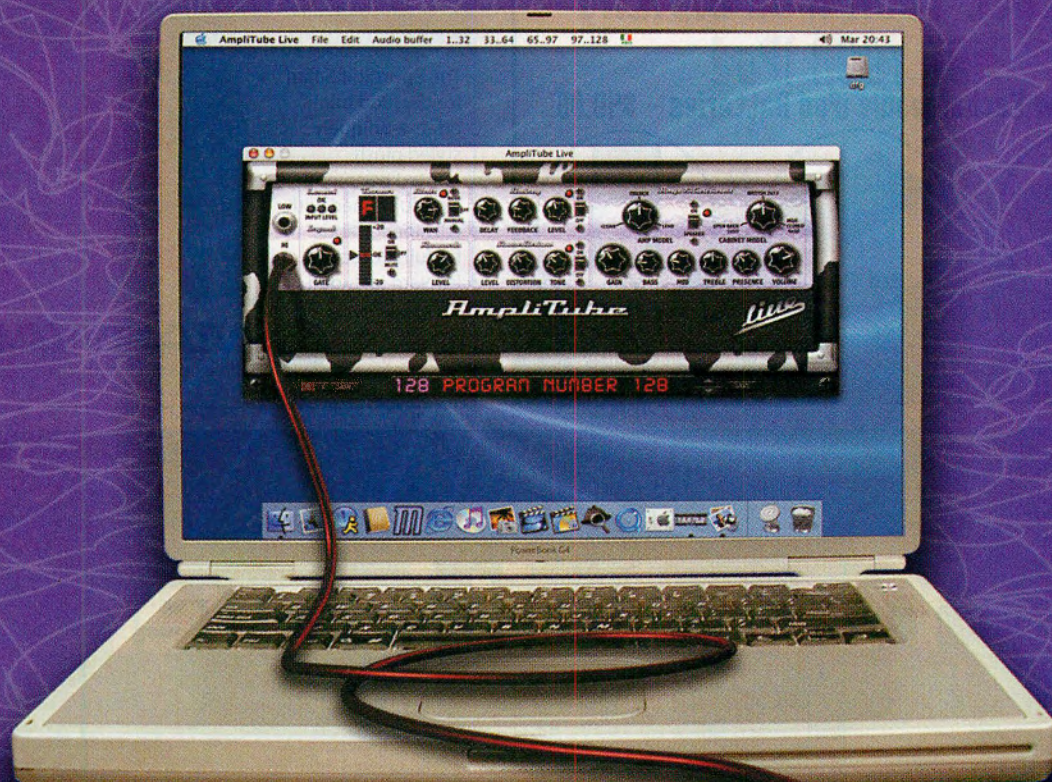
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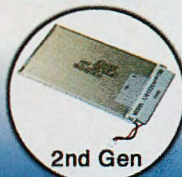
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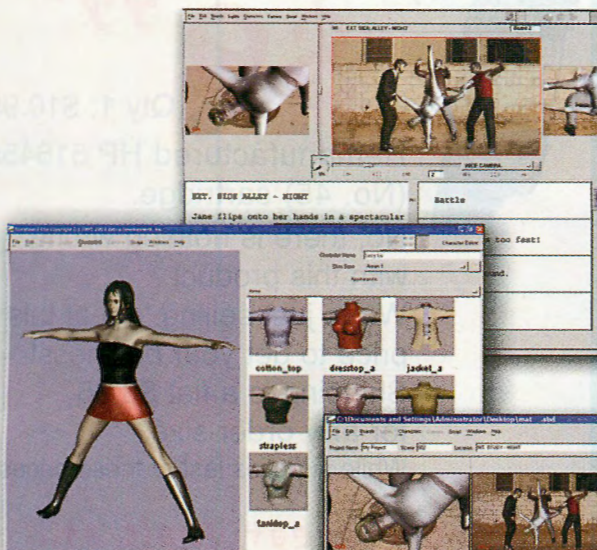
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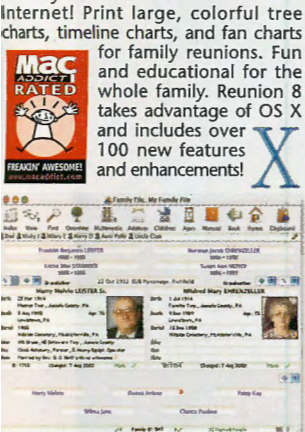
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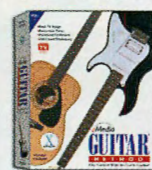
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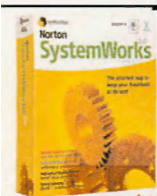
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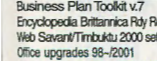
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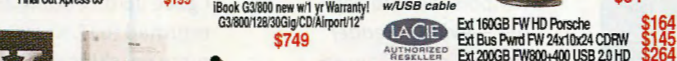
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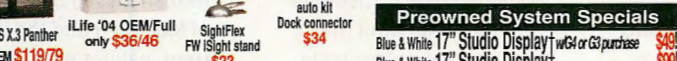
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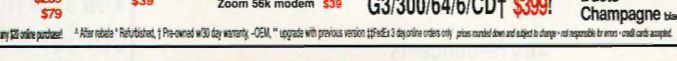
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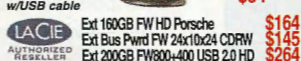


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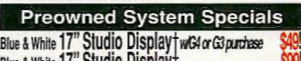
## Iomega External Drives



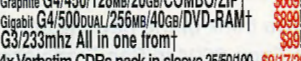
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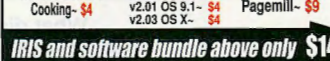
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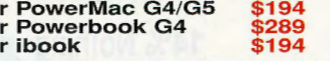
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## LETTERS

### IT'S A...?

How can I tell if my Mac is a boy or a girl?—*Anthony*  
Like the Axanar of Star Trek, Macs are an androgynous species. Just name yours Chris, Pat, or something else that goes both ways.—*Max*

### OMG IS RIGHT

OMG! UR Shut Down (Feb/04, p96) was, IMHO, funny! I LOL'ED, ROFL'ED, FOMCL!!!11!(<-LMAO!) AAR OOTD Fred was gonna dump Daph neway 4 Velma, IYKWIM (UKTR). AAR, SIG2R, TAFN.—*Jeffrey PS SICNR*  
OMG = oh my god, UR = you're, IMHO = in my humble opinion, LOL'ED = laughed out loud, ROFL'ED = rolled on the floor laughing, FOMCL = fell out of my chair laughing, 11! = added emphasis, LMAO = laughed my ass off, AAR = at any rate, OOTD = one of these days, neway = anyway, 4 = for, IYKWIM = if you know what I mean, UKTR = you know that's right, SIG2R = sorry, I got to run, TAFN = that's all for now, PS = post script, SICNR = sorry, I could not resist

### A HOME RUN

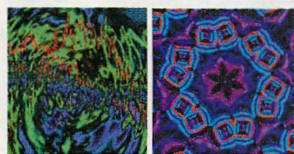
When I received this month's issue of *MacAddict*, I nearly passed out. The article "Upgrade Your Mac" (Feb/04, p17) was just what I was looking for, as were some awesome reviews. You hit the fencer in the chest.—*Matt Maychrowitz*

### SCHOOLHOUSE ROCKS

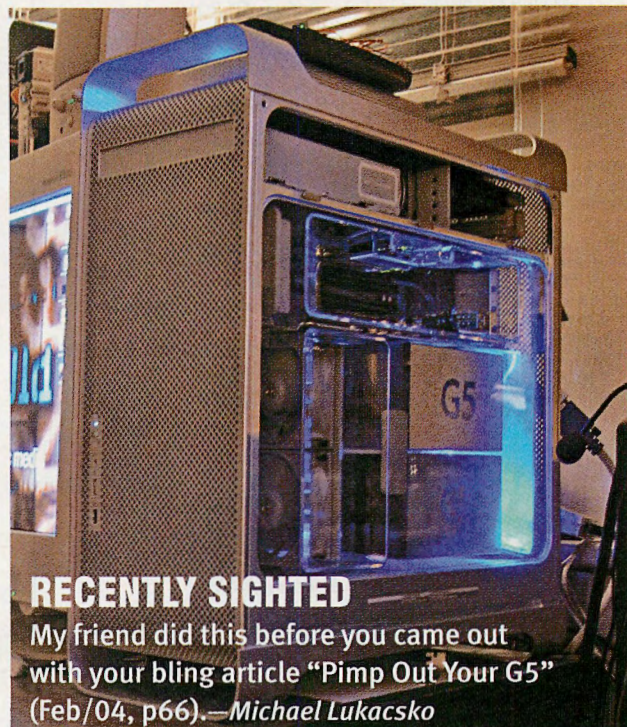
My school rocks. The computer lab is filled with iMacs—17 of them, with 17-inch screens. Read it and weep. My computer teacher let all the Mac addicts at school watch the streaming Webcast of Steve Jobs's keynote. I am so lucky to go to this school.—*Max* "I love the back issues" Mamis  
Bet you don't have to walk to school through three feet of snow, either.—*Max*

### WILD ON VISUALIZERS

After reading "Party with Your Mac" (Mar/04, p28), I gave the visualizer Kaleidostrobe X (free, [www.lasi.org](http://www.lasi.org)) a shot. I found myself lacking in the wowed department. Don't get me wrong. The Kaleidostrobe is gorgeous, but I don't see it as a replacement for the stock iTunes visualizer, with which I've blown a lot of minds!—*Marc Parsons*  
I guess it's all about how much of your mind you want to blow.—*Max*



Which floats your boat?  
iTunes' dizzying designs (left)  
or Kaleidostrobe's pretty  
patterns (right)?



### RECENTLY SIGHTED

My friend did this before you came out with your bling article "Pimp Out Your G5" (Feb/04, p66).—*Michael Lukacsko*

### GET POISONED

I have always wanted to access the Kazaa network with my Mac and have never been able to. You mentioned Poisoned as a way to access Kazaa (*Ask Us*, Mar/04, p64). I rejoiced, but then fell in despair when my computer found no address by the name [www.poisonedproject.com](http://www.poisonedproject.com).—*Avid Q. Reader*  
Poisoned's developers are currently experiencing administrative difficulties with that URL. Until they fix it, go to [www.gottsilla.net](http://www.gottsilla.net).—*Max*

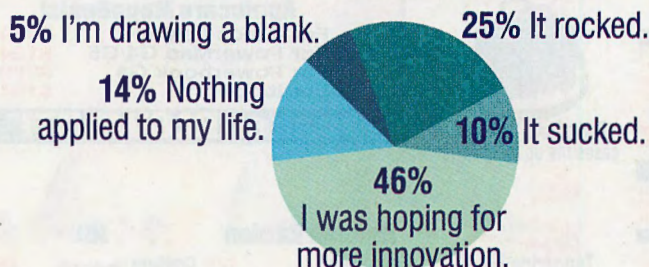
### POVERTY IS SO OVERRATED

Three years ago, when I changed careers from IT professional to magazine editor and moved to be near my new job, I almost tossed my back issues away—but they ended up making the move. After living near the poverty level all that time, I gave up on editing and returned to IT. Knowing how rusty my skills were, I dove into my *MacAddict* library to refresh myself on the foibles of Mac OS 9 and the joys of troubleshooting. I breathe easier now, knowing that

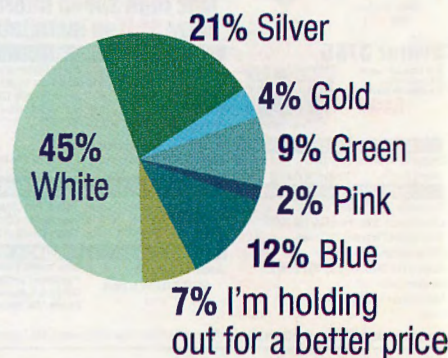
## Survey Says

Here are the results of our January 2004 survey. Check out [www.macaddict.com](http://www.macaddict.com) each month for a new online poll.

What did you think of the news from January's Mac Expo 2004 in San Francisco?



What's your favorite iPod color?



464 respondents




## WRITE TO US!

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LOG OUT  95

I have all your accrued intelligence by my side. A huge thank-you for saving my butt and my job, as well as saving me from having to move in with my mom.  
—Anonymous IT professional

## BEST FOOT FORWARD

I saw these socks in a Japanese shopping mall.—Boon



Somehow we missed this announcement at the Expo keynote.

## THE MACADDICT SMACKDOWN

I have to feed you guys some buckwheats about that skull-crushingly lame MacAddict article "Mac vs. PC Smackdown" (Jan/04, p35), in which you let yourselves get suckered into an absurd comparison of Macs versus PCs—on their terms! Of course PCs look about as good as Macs if you only compare hardware, but it's the operating systems that make all the difference. PCs are almost always down with something—if it's not a virus, a worm, or a Trojan horse, it's some driver problem. Through all this, our G4s and eMacs just keep purring along with nary a problem.—T. Thielsen  
We couldn't agree more—and we did say that "hardware is only part of the story."—Max

## CORD ANGER MANAGEMENT

The next time you do a story such as "Upgrade Your Mac" (Feb/04, p16), please go into more detail. I just put a new hard drive into my dual Power Mac G4 and almost totally destroyed it. You could have told your readers how to take a power-supply cable properly off a hard drive. I completely ripped the cables out of the white connector clip. I did insert the power supply wires back into the clip, but should I worry about it exploding?

—Sam Robbins

Pull with the plug, not with the cord, a wise man once said—or was it your mom? An explosion seems unlikely, but keep your drive backed just in case.—Max

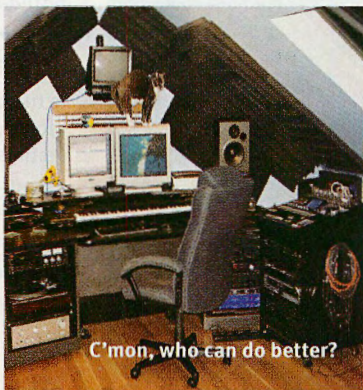
## WORD ALTERNATIVE

Is Apple planning to develop its own word processor? I am so sick of using Microsoft Word.—Caleb

Check out good ol' AppleWorks, now at version 6.2.7 (\$79, [www.apple.com](http://www.apple.com)).—Max

## THE ULTIMATE ULTIMATE STUDIO?

I think I've got you all beat in the quest for the ultimate home studio. I just finished my attic renovation (see picture) and moved my studio and cat out of the bedroom.—Darryl Kubian



C'mon, who can do better?

# WIN!



## Win Griffin's Dream Pack

Griffin Technology ([www.griffintechnology.com](http://www.griffintechnology.com)) makes the best accessories you never knew you needed, such as the PowerMate USB Controller Knob (\$45), stylish iCurve 'Book stand (\$39.99), iTrip FM transmitter for your iPod (\$35), and iMic USB audio interface (\$39.99). Just write the best caption for the picture below and send it in.

Only one entry per contestant.

## Entry Form



Write a caption for this picture.

## CONTESTANT INFORMATION

Full Name: \_\_\_\_\_  
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Send snail-mail entries to: Griffin Technology Contest  
MacAddict magazine, 150 North Hill Dr., Brisbane, CA 94005.  
Send email entries to: [contest@macaddict.com](mailto:contest@macaddict.com) with the subject Griffin Technology Contest.  
Deadline for entry: May 31, 2004.  
Contest results will appear in our Sep/04 issue.

Contest Rules: The judges will be MacAddict editors and will base their decision on 33 percent humor, 33 percent originality, and 33 percent creativity. All entries must be received no later than May 31, 2004, with the winner announced around September 2004. By entering this contest, you agree that Future Network USA may use your name, likeness, and Web site for promotional purposes without further payment. All prizes will be awarded, and no minimum number of entries is required. Prizes won by minors will be awarded to their parents or legal guardians. Future Network USA is not responsible for damages or expenses the winners might incur as a result of this contest or the receipt of a prize, and winners are responsible for income taxes based on the value of the prize received. A list of winners may also be obtained by sending a stamped, self-addressed envelope to Future Network USA c/o MacAddict Contest, 150 North Hill Dr., Brisbane, CA 94005. This contest is limited to residents of the United States. No purchase necessary, void in Arizona, Maryland, Vermont, Puerto Rico, and where prohibited by law.

## Winner!

Congratulations to Tristan Ing,  
who won HP's Scanjet 4670  
(\$199.99 value, [www.hp.com](http://www.hp.com)).



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PHOTOGRAPH BY NARASU REBBAPRAGADA



# ONE TOUGH CUSTOMER

We subject the Mac to pigeons, wildebeests, mentally unstable clowns, and more.

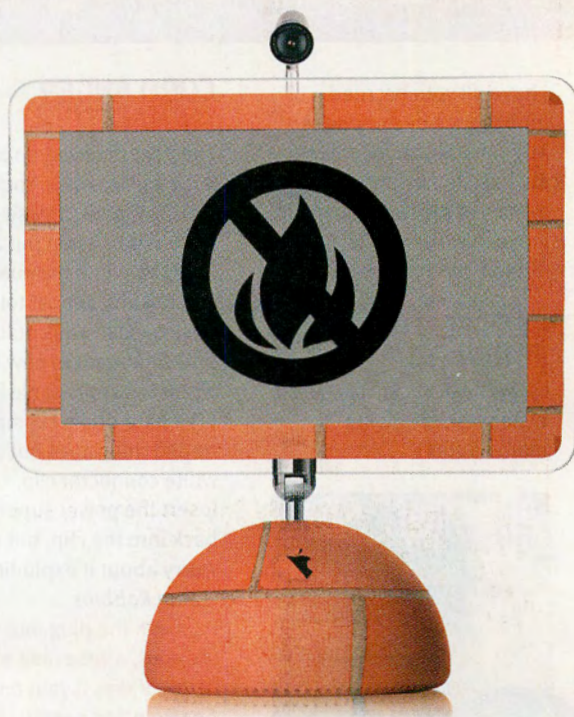
The Mac's ability to survive abuse has been well documented. Reader Randy Smith's tale of survival (Feb/04, p95), involving a Power Mac G3 that melted in a disastrous fire but ran just fine afterward, induced another reader to write in about an even more spectacular survival story:

One of my customers lives right below some high-tension power lines. Recently, one of the lines snapped and landed on her roof. Besides the blackened walls and charred wiring, every home appliance and electronic device was melted or vaporized. The silver lining to this debacle was that her iMac (plugged into the wall) still worked without a hitch. Her iBook was unharmed, as well. Most of the neighbors on her block lost several appliances and their computers to the residual shock that came down the power lines from my customer's house. None of them had Macs. That'll teach 'em.—JM

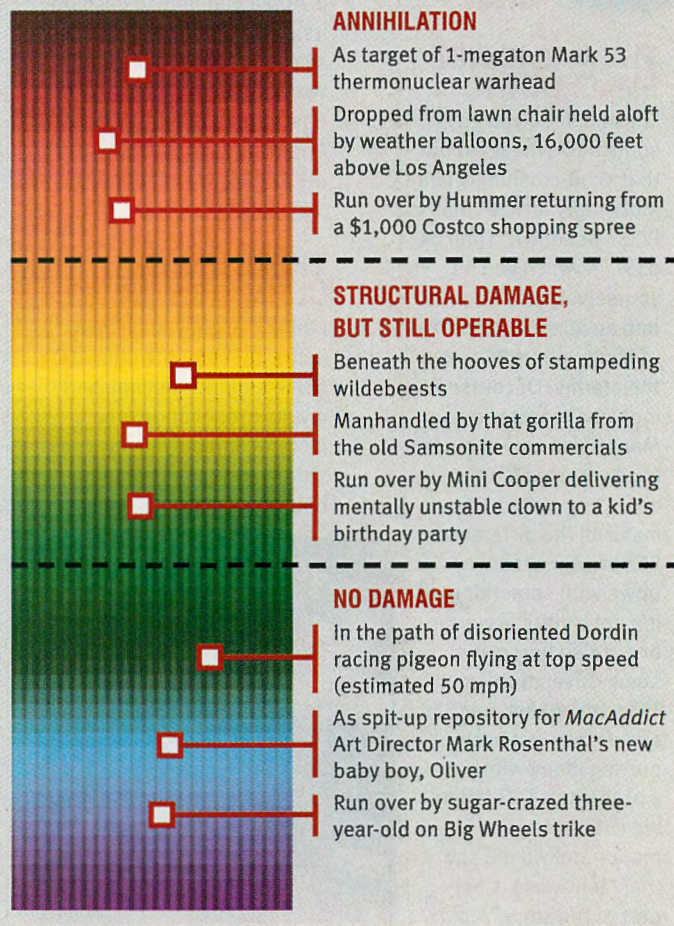
Inspired by this stunning tale of the Mac's durability (and the PC's relative wimpiness), we assembled a crack team of disaster-assessment professionals, supplied them with a passel of Power Mac G5s, and asked them to test the tensile strength of said Macs over an ascending scale of misadventures, adversities, hazards, calamities, disasters, and outright cataclysms. Our stress tests—and the loss of a few brave, if somewhat foolhardy, technicians—proved that although the Mac is one tough cookie, there are degrees of maximum gnarliness that even the best Cupertino has to offer cannot withstand. Here's a guide to help you determine where to put your Mac.

## OTHER PLACES TO AVOID PUTTING YOUR MAC:

- Fort Lauderdale during spring break
- Any Marshall's outlet on Red-Tag Sale day
- Fortress of Barad-dûr, Mordor
- Marilyn Manson's prop table
- Tokyo's Shinjuku subway station at rush hour
- Maximum PC's testing lab



## Power Mac Durability Range





# Mac for business.

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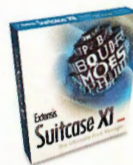
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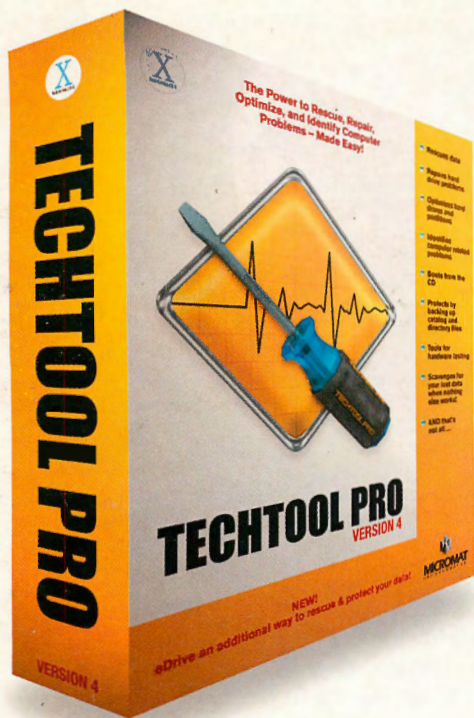


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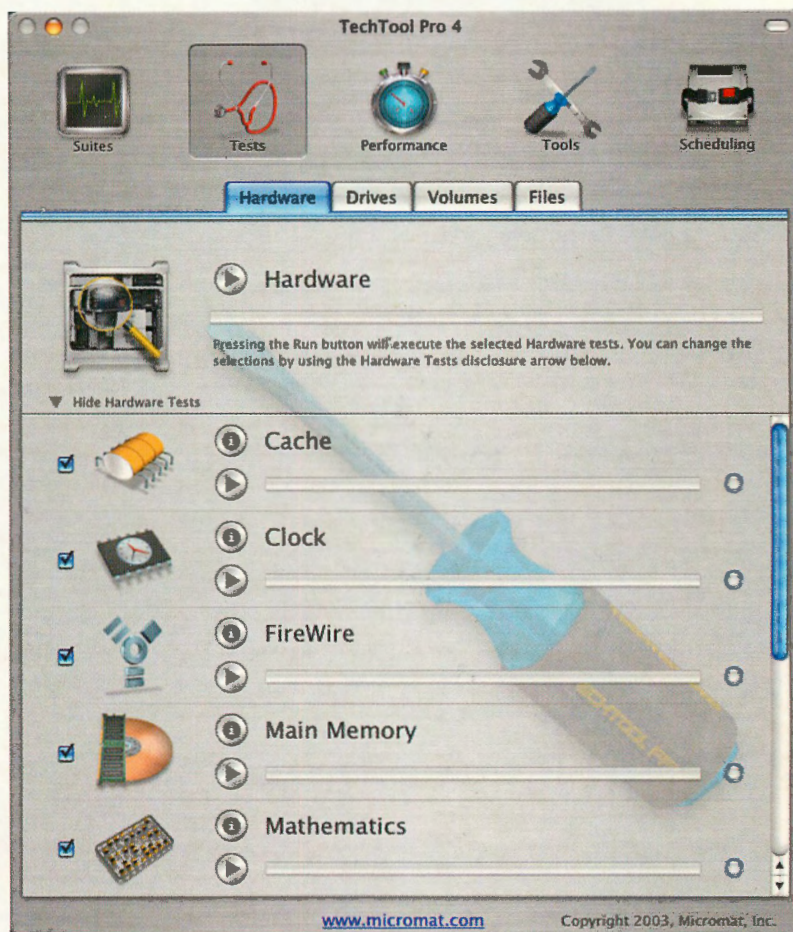
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